COREMORROW
Piezo Nano Motion

E00/E01 Series Piezo Controller

Piezo · Nano · Motion

CoreMorrow Ltd.

PRODUCT

CONTENTS

E00/E01 Series Piezo Controller/Amplifier List

E01 Series Piezo Controller/Amplifier

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Types		Size	Ampflier	Channel	Output [V]	Ave.current [mA]	Peak [mA]	Analog control	Software control	Servo control	Page
E01.A	E01.A1	9 inch	E05	1	120/150	291	1000	√	×	×	009
	E01.A1	9 inch	E05	1	-200~200	87.5	1000	√	×	×	011
	E01.A1	9 inch	E05	1	-20~200	175	1000	√	×	×	013
	E01.A1	9 inch	E07	1	-300~300	35	438	√	×	×	015
	E01.A1 (HV)	9 inch	E07	1	0~1000	30	500	√	×	×	017
	E01.A2	9 inch	E05	2	120/150	291	1000	√	×	×	019
	E01.A3	9 inch	E05	3	120/150	291	1000	√	×	×	021
	E01.A3	9 inch	E03	3	120/150	58	1000	√	×	×	023
	E01.A3	9 inch	E03	3	±100	35	1000	√	×	×	025
	E01.A3	9 inch	E08	3	-500~1500	15	120	√	×	×	027
	E01.A6	9 inch	E03	6	120/150	58	1000	√	×	×	029
	E01.A6	9 inch	E06	6	-300~300	5	15	√	×	×	031
	E01.A9	9 inch	E03	9	120/150	58	1000	√	×	×	033
E01.B	E01.B1	9 inch	E05	1	120/150	291	1000	√	×	√	035
	E01.B1 (HV)	9 inch	E07	1	0~1000	30	500	√	×	√	037
	E01.B2	9 inch	E05	2	120/150	291	1000	√	×	√	039
	E01.B3	9 inch	E03	3	120/150	58	1000	√	×	√	041
	E01.B3	9 inch	E03	3	120/150	58	1000	√	×	√	043
	E01.B4	9 inch	E03, E05	4	120/150	58/291	1000	√	×	√	045
	E01.B6	9 inch	E03	6	120/150	58	1000	√	×	√	047
	E01.B6	9 inch	E03	6	120/150	58	1000	√	×	√	049
E01.C	E01.C1	9 inch	E05	1	120/150	291	1000	√	√	×	051
	E01.C1 (HV)	9 inch	E07	1	0~1000	30	500	√	√	×	053
	E01.C3	9 inch	E05	3	120/150	58	1000	√	√	×	055
	E01.C3	9 inch	E03	3	±100	35	1000	√	√	×	057
E01.D	E01.D1	9 inch	E05	1	120/150	291	1000	√	√	√	059
	E01.D1 (HV)	9 inch	E07	1	0~1000	30	500	√	√	√	061
	E01.D3	9 inch	E03	3	120/150	58	1000	√	√	√	063
	E01.D3	9 inch	E03	3	120/150	58	1000	√	√	√	065
	E01.D4	9 inch	E03, E05	4	120/150	58	1000	√	√	√	067

E00 Series Piezo Controller/Amplifier

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Types		Size	Ampflier	Channel	Output [V]	Ave.current [mA]	Peak [mA]	Analog control	Software control	Servo control	Page
E00.A	E00.A6	19 inch	E05	6	120/150	291	1000	√	×	×	070
	E00.A6	19 inch	E07	6	-300~300	-	438	√	×	×	072
	E00.A12	19 inch	E06	12	-300~300	5	15	√	×	×	073
	E00.A18	19 inch	E03	18	120/150	58	1000	√	×	×	075
E00.B	E00.B4	19 inch	E05	4	120/150	291	1000	√	×	√	077
	E00.B12	19 inch	E03	12	120/150	58	1000	√	×	√	079
E00.C	E00.C2	19 inch	E05	2	120/150	291	1000	√	√	×	081
	E00.C3	19 inch	E05	3	120/150	291	1000	√	√	×	083
	E00.C3	19 inch	E07	3	0~1000	30	438	√	√	×	085
	E00.C3	19 inch	E08	3	-500~1500	17	120	√	√	×	087
	E00.C6	19 inch	E03	6	120/150	58	1000	√	√	×	089
E00.D	E00.D1	19 inch	E05	1	0~800	100	300	√	√	√	091
	E00.D3	19 inch	E05	3	120/150	291	1000	√	√	√	093
	E00.D3	19 inch	E05	3	120/150	291	1000	√	√	√	095
	E00.D3	19 inch	E05 CAP	3	120/150	291	1000	√	√	√	097
	E00.D3	19 inch	E07	3	0~1000	30	438	√	√	√	099
	E00.D4	19 inch	E03, E05	4	120/150	58/291	1000	√	√	√	101
	E00.D6	19 inch	E03	6	120/150	58	1000	√	√	√	103
	E00.D6	19 inch	E03	6	120/150	58	1000	√	√	√	105

Note: The models in this catalog are only the more commonly used models. If there is no model that meets your requirements, please send your request to info@coremorrow.com or contact the person in charge of the area, and we will recommend suitable products for you.

E00/E01 Series Piezo Controller /Amplifier Introduction

Characteristics

Optional output voltage within 0~1800V/±900V, up to 18 channels for standard versions, up to hundreds of channels for custom version.
Modular, free module combination, over-current proof, dynamic power protection, etc.

Function

Optional channels, control way (analog control, software control, open-loop or servo control, button control, knob control,etc.

Slection Guide

E0 [0] . [A] [3]

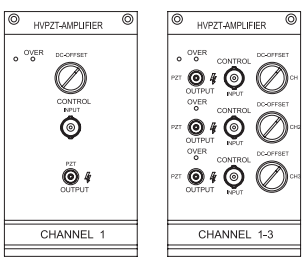
Chassis size
- [0] 19 inch
- [1] 9 inch

Type(module combination)
- [A] Analog control
- [B] Analog control, servo control
- [C] Analog control, software control
- [D] Analog control, servo control, software control

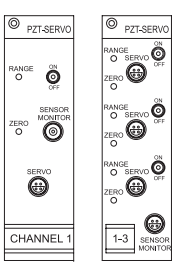
Channels
- [1] 1 channel
- [2] 2 channels
- [3] 3 channels
- … …

Combination

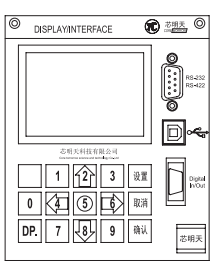
E00/E01 is combined by 4 modules, and users can choose modules freely.



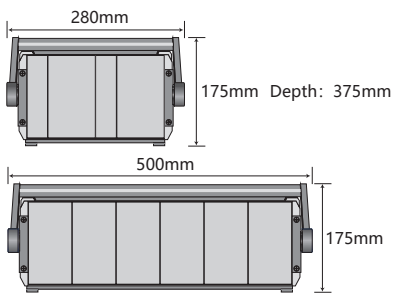
Power Amplifier Module
(Essential module)



PZT Sensor
Control Module



Display & Interface Module
(software control)

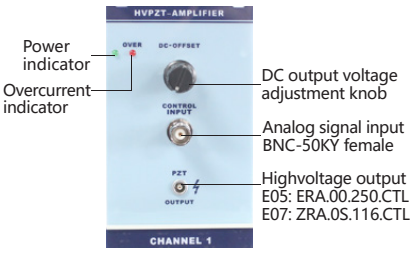


Chassis & Power Supply Module
(Essential module)

Modules Introductoin

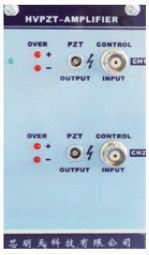
1.Power Amplifier Module

Power amplifier Module: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.

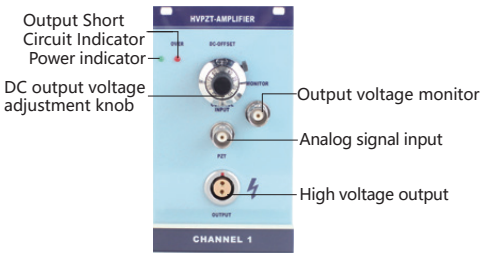


E05/E07

E03



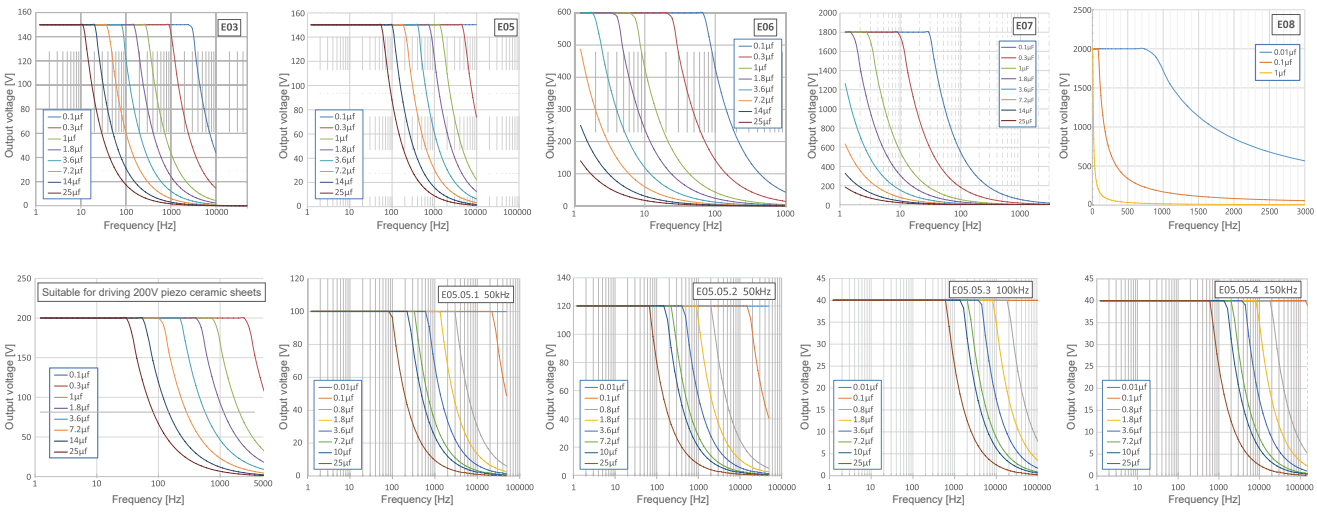
E06



E08

Module Type	Channels	Ave. Power	Output voltage	Frequency
E03	3	7W/channel	0~100V/120V/150V/300V, ±100V/±150V	1kHz, 10kHz, 30kHz, 50kHz
E05	1	35W	0~40V/100V/120V/150V/200V/300V/400V/600V, ±100V/±150V/±200V/±300V	1kHz, 5kHz, 10kHz, 30kHz, 50kHz, 100kHz, 150kHz
E06	2/4	3W/channel	-300V~+300V	1kHz
E07	1	5W	0~600V/900V/±450V	3kHz
E08	1	34W	-500~1500V	2kHz
Combination/Bipolar	1	10W	0~1800V, ±900V	3kHz

Curves



E03 Power Amplifier Module

Channels	Type	Analog input	Output	Frequency	Ave. current	Peak current	Ripple
1~3	E03.00.1	-1~10V	-20~200V	>5kHz	35mA	105mA	5mV
	E03.00.2	-1~10V	-20~200V		35mA	1000mA	
	E03.00.3	-0.67~10V	-20~300V		23mA	69mA	
	E03.00.4	-0.67~10V	-20~300V		23mA	1000mA	
	E03.00.5	-10~10V	±100V		35mA	1000mA	
	E03.00.6	-10~10V	±150V		23mA	1000mA	
	E03.00.7	-3.33~10V	-20~60V	10kHz	100mA	330mA	
	E03.00.9	-2~+10V	-20~+100V		70mA	1000mA	
	E03.00.10	-1.67~+10V	-20~+120V		58mA	1000mA	
	E03.00.11	-1.33~+10V	-20~+150V		46mA	1000mA	
	E03.00.12	-2~+10V	-20~+100V	30kHz	70mA	210mA	
	E03.00.13	-1.67~+10V	-20~+120V		58mA	174mA	
	E03.00.14	-1.33~+10V	-20~+150V		46mA	138mA	
	E03.00.15	-1~+10V	-20~+200V		35mA	105mA	
	E03.00.16	-0.67~+10V	-20~+300V		23mA	69mA	
	E03.00.17	-10~+10V	-100~+100V		35mA	105mA	
	E03.00.18		-150~+150V		23mA	69mA	
	E03.05.1	0~+10V	-20~+100V	50kHz	70mA	210mA	
	E03.05.2		-20~+120V		58mA	174mA	

E05 Power Amplifier Module

Channels	Type	Analog input	Output	Frequency	Ave. current	Peak current	Ripple
1	E05.00.1	-2~10V	-20~+100V	1kHz	350mA	1050mA	5mV
	E05.00.2	-1.67~10V	-20~+120V		291mA	873mA	
	E05.00.3	-1.33~10V	-20~+150V		233mA	700mA	
	E05.00.4	-2~10V	-20~+200V		175mA	525mA	
	E05.00.5	-0.67~10V	-20~+300V		116mA	348mA	
	E05.00.6	-0.5~10V	-20~+400V		87mA	260mA	10mV
	E05.00.7	-10~+10V	-100~+100V	5kHz	175mA	525mA	
	E05.00.8		-150~+150V		116mA	348mA	
	E05.00.9		-200~+200V		87mA	260mA	
	E05.00.10*		-300~+300V		116mA	348mA	
	E05.00.11	-1~+10V	-20~+200V		175mA	525mA	
	E05.00.12	-0.67~+10V	-20~+300V		116mA	348mA	
	E05.00.13	-2~+10V	-20~+100V	10kHz	330mA	1000mA	5mV
	E05.00.14	-1.67~+10V	-20~+120V		290mA	1000mA	
	E05.00.15	-1.33~+10V	-20~+150V		230mA	1000mA	
	E05.00.16	-1~+10V	-20~+200V	>5kHz	175mA	1000mA	
	E05.00.17*	0~+10V	0~+600V	5kHz	120mA	350mA	10mV
	E05.00.18	-0.67~+10V	-20~+300V	>5kHz	115mA	1000mA	5mV
	E05.00.19	-10~+10V	-100~+100V	>5kHz	175mA	1000mA	
	E05.00.20	-10~+10V	-150~+150V	>5kHz	115mA	1000mA	
	E05.00.21	-10~+10V	-200~+200V	>5kHz	87.5mA	1000mA	
	E05.00.22	0~-10V	0~-300V	>5kHz	115mA	1000mA	
	E05.00.23	0~10V	-20~400V	3kHz	87.5mA	1000mA	
	E05.00.24	0~-10V	0~-400V	2kHz	87.5mA	1000mA	
	E05.03.1	-2~+10V	-20~+100V	30kHz	330mA	1000mA	
	E05.03.2	-1.67~+10V	-20~+120V		290mA	1000mA	
	E05.03.3	-1.33~+10V	-20~+150V		230mA	1000mA	
	E05.03.4	-1~+10V	-20~+200V		175mA	1000mA	
	E05.03.5	-0.67~+10V	-20~+300V		115mA	1000mA	
	E05.03.6	-10~+10V	-100~+100V		175mA	1000mA	
	E05.03.7	-10~+10V	-150~+150V		115mA	1000mA	
	E05.05.1	0~+10V	0~+100V	50kHz	330mA	1000mA	
	E05.05.2	0~+10V	0~+120V	50kHz	290mA	1000mA	
	E05.05.3	0~+10V	0~+40V	100kHz	625mA	1875mA	20mV
	E05.05.4	0~+10V	0~+40V	120kHz			

*:Combination type, combined with 2 modules.

E06 Power Amplifier Module

Channels	Type	Analog input	Output	Frequency	Ave. current	Peak current	Ripple
2	E06.00.A2	-10~+10V	-300~+300V	1kHz	5mA	15mA	20mV

E07 Power Amplifier Module

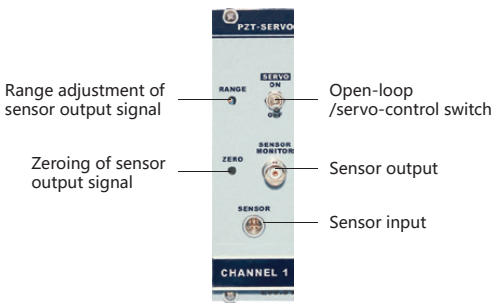
Channels	Type	Analog input	Output	Frequency	Ave. current	Peak current	Ripple
1	E07.00.1	-10~+10V	±300V	2kHz	35mA	438mA	10mV
	E07.00.2	0~+10V	0~1000V		30mA		

E08 Power Amplifier Module

Channels	Type	Analog input	Output	Frequency	Ave. current	Peak current	Ripple
1	E08.00	-2.5~7.5V	-500~1500V	2kHz	17mA	55mA	50mV
	E08.06	0-10V	0~2000V	2kHz	17mA	55mA	50mV
	E08.07	-10~10V	-500~500V	2kHz	30mA	90mA	50mV

2.E09 PZT Position Sensor Module

E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



E09.S1/L1

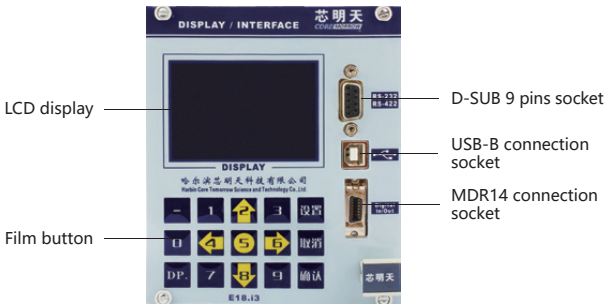
E09.S3/L3

E09.C1

Types	E09.S1	E09.S3	E09.L1	E09.L3	E09.C1
Functions	PZT Position Sensor Module				
Channels	1	3	1	3	1
Sensor type	SGS	SGS	LVDT	LVDT	CAP
Servo Characteristics	Analog P-I+notch filter	Analog P-I+notch filter	Analog P-I+notch filter	Analog P-I+notch filter	Analog P-I+notch filter
Sensor input port	ERA.0S.304.CLL	ERA.0S.304.CLL	ERA.0S.304.CLL	ERA.0S.304.CLL	G10S0C-FT1LJG0-000L
Sensor output port	BNC	ERA.0S.303.CLL	BNC	ERA.0S.303.CLL	BNC
Voltage output(V)	0~10				
Operating temperature(° C)	0~50	0~50	+10~+40	+10~+40	+10~+50

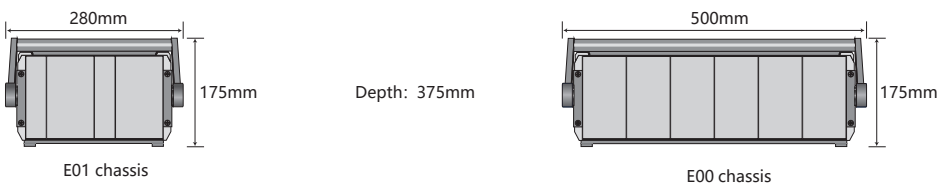
3.E18 Display & Interface Module

With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Types	E18.i1		E18.i3	
Functions	Display/Interface Module			
Channels	1		3	
Processor	32bit single core microprocessor 168MHz			
Linearity	0.01%			
D/A converter	16Bit ±10V	24 Bit ±10V	16Bit ±10V	24 Bit ±10V
Output resolution	1/30000	1/1000000	1/30000	1/1000000
A/D converter	16 Bit ±10V			
Film button	15 buttons			
Computer interface	RS-232/422, USB			
Baud rate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000			
Output wave frequency	10kHz			
I/O interface	1~3pcs, user can set the input or output, MDR14 connector			
LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters			
Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave			
Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters			
Software waveform control	Programmable waveform output, standard waveform output			
Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development			
Operating temperature(° C)	0~50			

4.Chassis & Power Supply Module



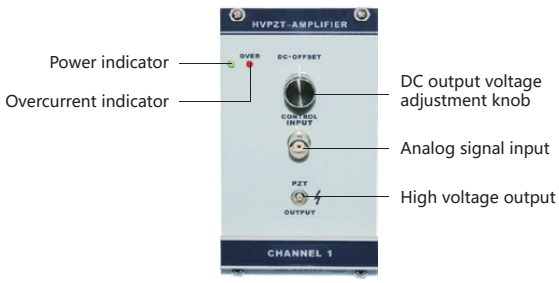
E01 Series Piezo Controller
9 Inch Chassis

E01.A1 Piezo Amplifier (E05 module)

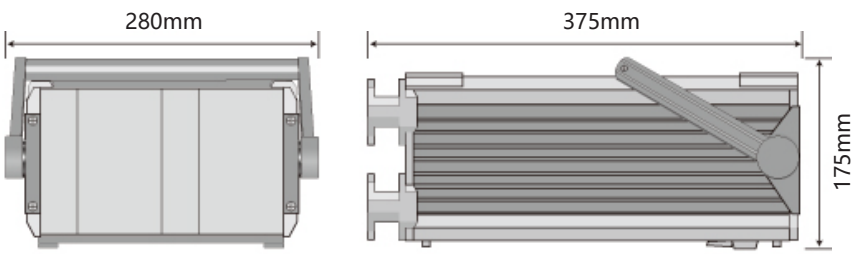
- 1 channel
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E05 power amplifier module × 1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



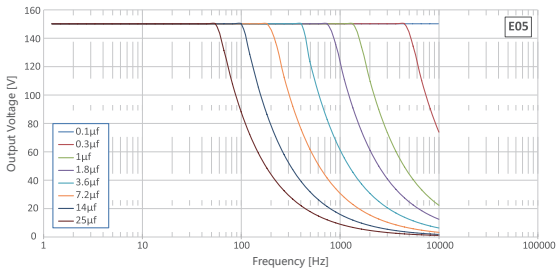
E01 Chassis & Power Supply Module × 1



Technical Data

Types		E01.A1 (E05 module)
Power amplifier module	Channels	1
	Contol analog input	-1.67~10V (Optional 0~5V)
	Output voltage	-20~120V (Optional -20~150V)
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)
	Ave.current	291mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×1
(only for PZT with bare wires)

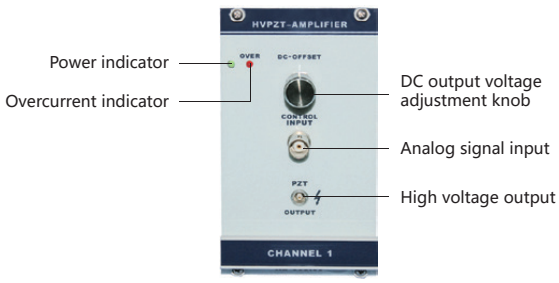
BNC to fish clip line×1
(for analog input)

E01.A1 Piezo Amplifier (E05 module)

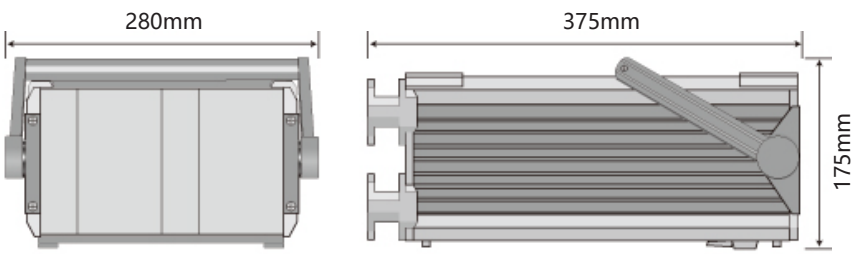
- 1 channel
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E05 power amplifier module × 1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



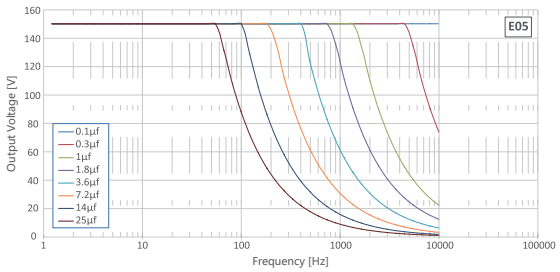
E01 Chassis & Power Supply Module × 1



Technical Data

Types		E01.A1 (E05 module)
Power amplifier module	Channels	1
	Contol analog input	-10~10V
	Output voltage	-200~200V
	Ripple	10mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	20kHz
	Ave.current	87.5mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	20
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×1
(only for PZT with bare wires)

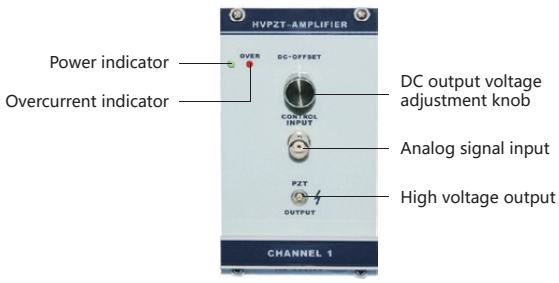
BNC to fish clip line×1
(for analog input)

E01.A1 Piezo Amplifier (E05 module, for 200V piezo actuator)

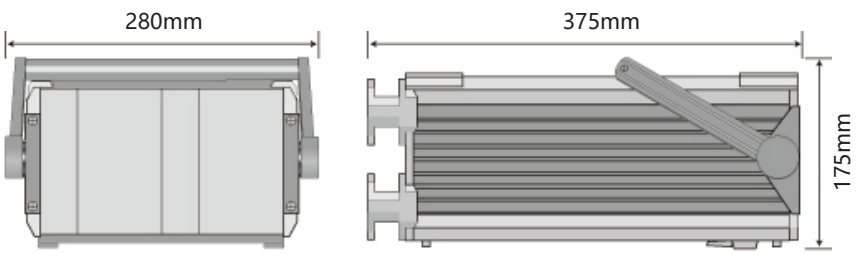
- 1 channel
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E05 power amplifier module × 1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



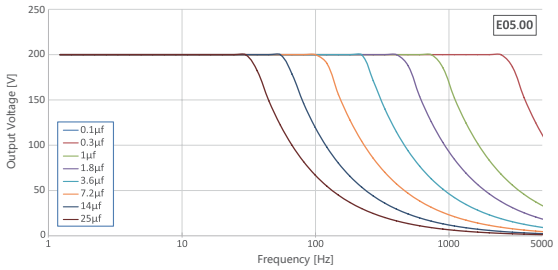
E01 Chassis & Power Supply Module × 1



Technical Data

Types		E01.A1 (E05 module)
Power amplifier module	Channels	1
	Contol analog input	-1~+10V
	Output voltage	-20~+200V
	Ripple	5mV
	Voltage stability	<0.1%F.S./8 hours
	Input impedance	100kΩ±20%
	Bandwidth	>5kHz
	Ave.current	175mA
	Peak current	1000mA
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	20
Chassis & power supply module	Power supply	AC 220V±10% 50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×375×175mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×1
(only for PZT with bare wires)

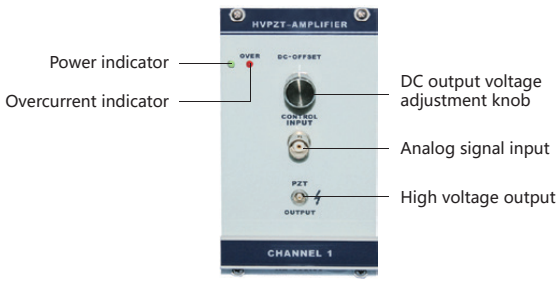
BNC to fish clip line×1
(for analog input)

E01.A1 Piezo Amplifier (E07 module, for piezo shear actuator)

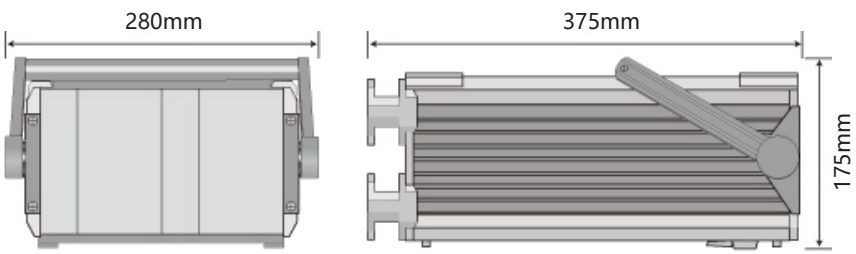
- 1 channel
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E07 power amplifier module × 1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



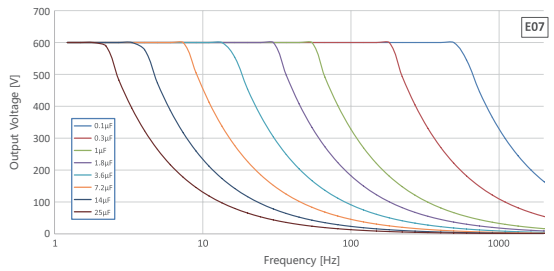
E01 Chassis & Power Supply Module × 1



Technical Data

Type		E01.A1(E07 module)
Power amplifier module	Channels	1
	Contol analog input	-10~+10V
	Output voltage	-320~+320V
	Ripple	10mV
	Voltage stability	<0.1%F.S./8 hours
	Input impedance	100kΩ±20%
	Bandwidth	2kHz
	Ave.current	35mA
	Peak current	438mA
	Bandwidth (1/10 signal)	5kHz
	Voltage gain	32
Chassis & power supply module	Power supply	AC 220V±10% 50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×375×175mm
Function	Basic control way	Manual adjustment, Analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO cable×1
(Only for PZT with bare wires)

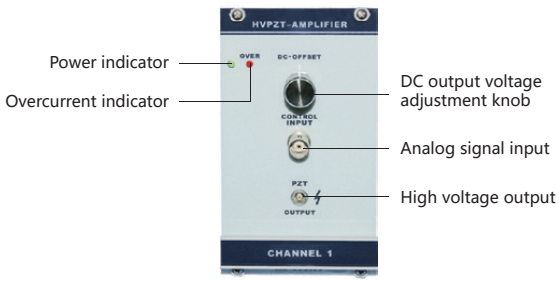
BNC to fish clip line×1
(for analog input)

E01.A1 Piezo Amplifier（E07 module, 1000V）

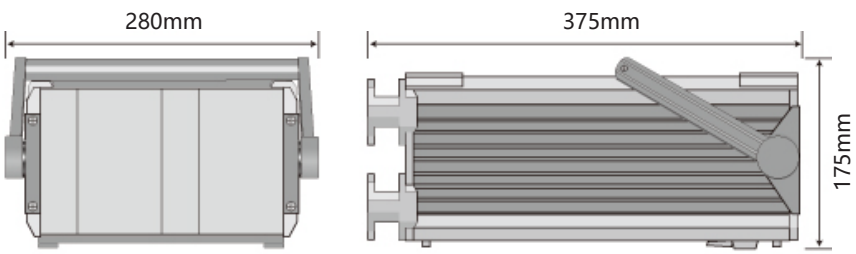
- 1 channel
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E07 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



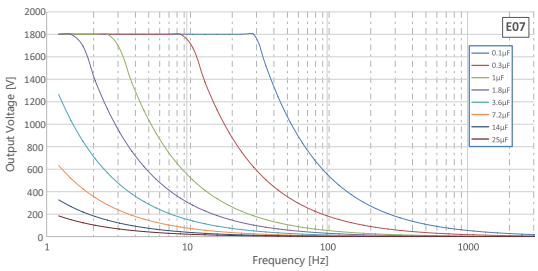
E01 Chassis & Power Supply Module×1



Technical Data

Type		E01.A1(E07 module,1000V)
Power amplifier module	Channels	1
	Contol analog input	0~10V
	Output voltage	0~1000V
	Ripple	50mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	2kHz
	Ave.current	30mA
	Peak current	500mA
	Voltage gain	100
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual ajustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO cable×1
(Only for PZT with bare wires)

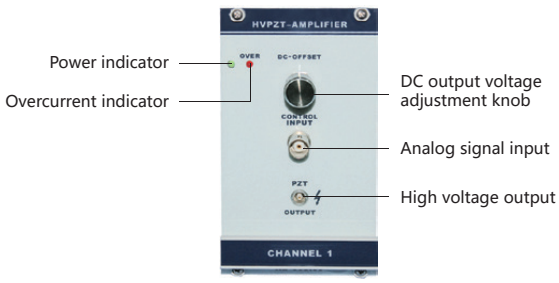
BNC to fish clip line×1
(for analog input)

E01.A2 Piezo Amplifier (E05 module)

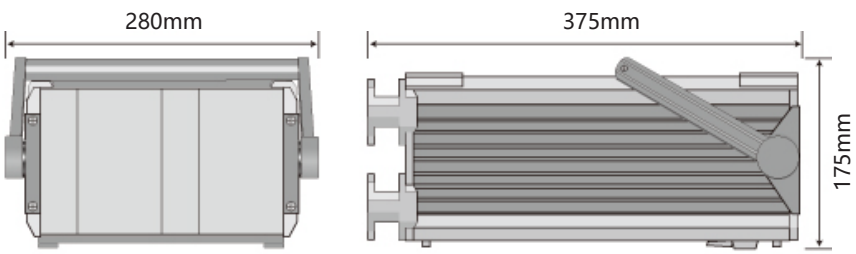
- 2 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E05 power amplifier module × 2: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



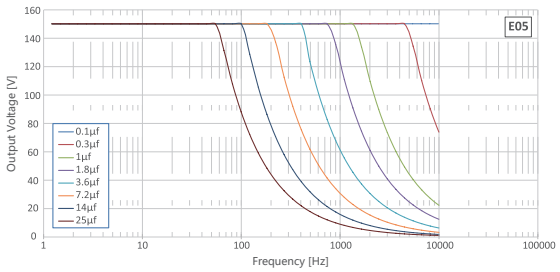
E01 Chassis & Power Supply Module × 1



Technical Data

Types		E01.A2 (E05 module)
Power amplifier module	Channels	2
	Contol analog input	-1.67~10V (Optional 0~5V)
	Output voltage	-20~120V (Optional -20~150V)
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)
	Ave.current	291mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

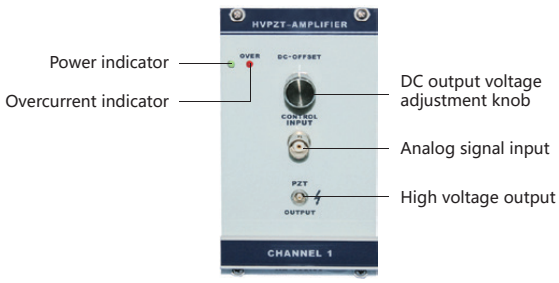
Power cable ×1 | LEMO to fish clip line×2 (only for PZT with bare wires) | BNC to fish clip line×2 (for analog input)

E01.A3 Piezo Amplifier（E05 module）

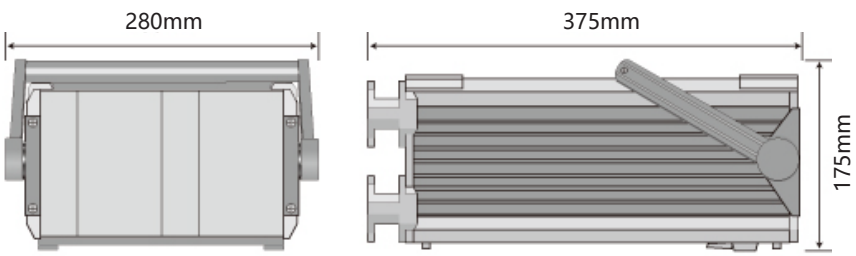
- 3 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E05 power amplifier module × 3: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



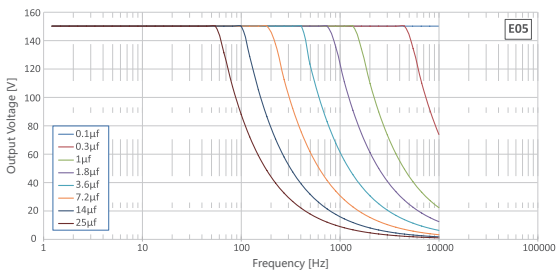
E01 Chassis & Power Supply Module × 1



Technical Data

Types		E01.A3（E05 module）
Power amplifier module	Channels	3
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	291mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×3
(only for PZT with bare wires)

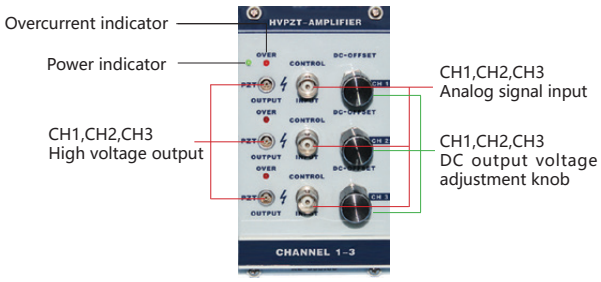
BNC to fish clip line×3
(for analog input)

E01.A3 Piezo Amplifier（E03 module）

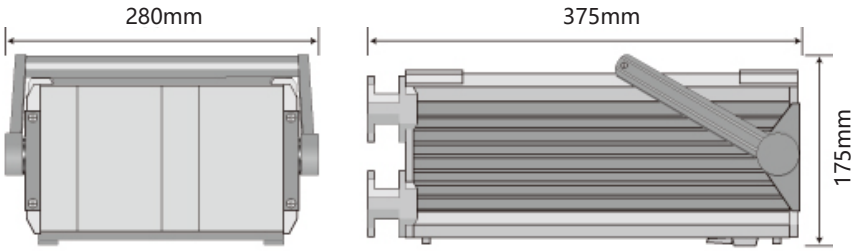
- 3 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E03 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



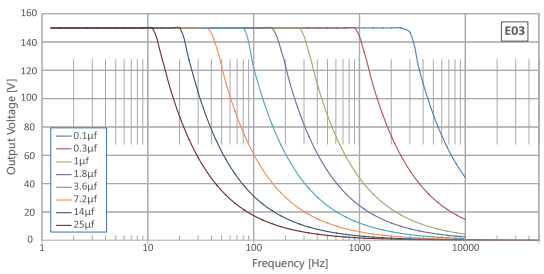
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.A3 (E03 module)
Power amplifier module	Channels	3
	Contol analog input	-1.67~10V (Optional 0~5V)
	Output voltage	-20~120V (Optional -20~150V)
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)
	Ave.current	58mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×3
(only for PZT with bare wires)

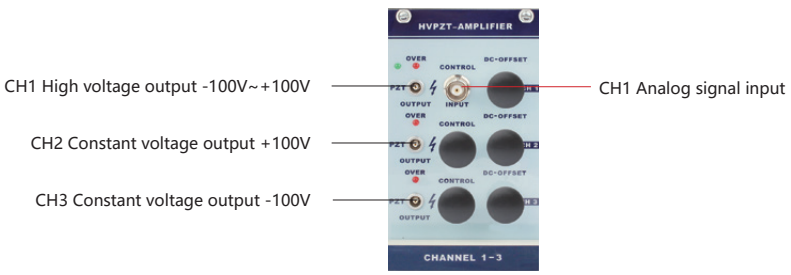
BNC to fish clip line×3
(for analog input)

E01.A3 Piezo Amplifier (For driving piezo benders)

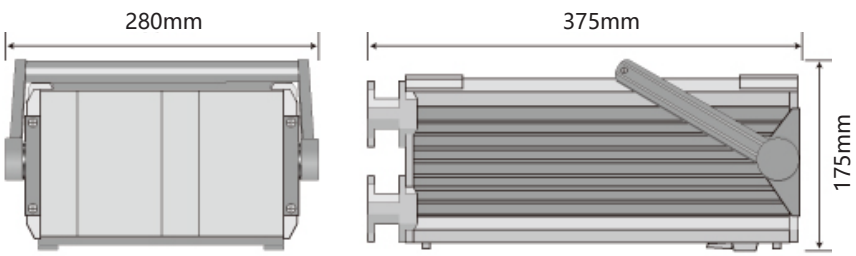
- 3 channels (2 constant voltage outputs and 1 variable voltage output)
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E03 power amplifier module(with constant voltage)×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



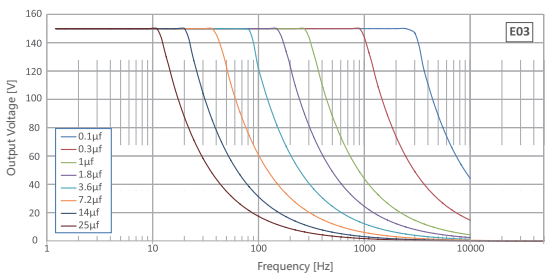
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.A3 (E03 module)
Power amplifier module	Channels	3
	CH1 contol analog input	-10V~+10V
	CH1 output voltage	-100V~+100V
	CH2 output voltage	+100V constant voltage
	CH3 output voltage	-100V constant voltage
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz
	Ave.current	35mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	10
	Knob adjustment	-
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

BNC to fish clip line×1
(for analog input)

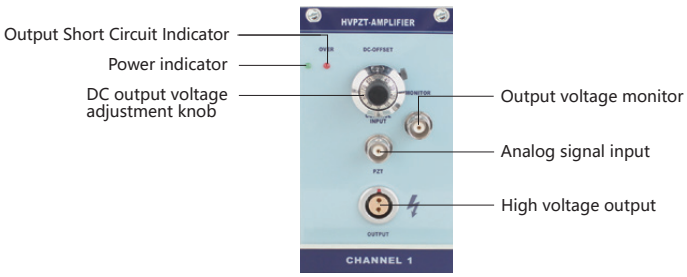
LEMO to fish clip line×3
(only for PZT with bare wires)

E01.A3 High Voltage Piezo Amplifier（E08 module）

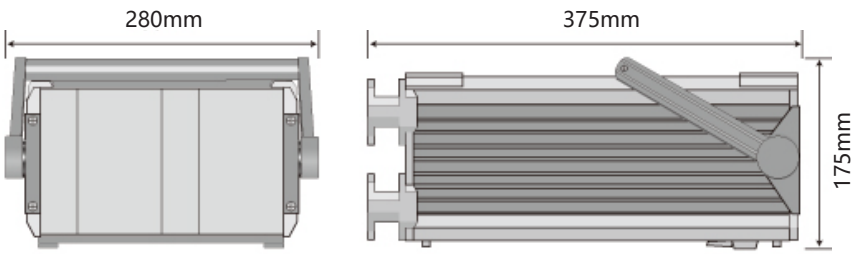
- 3 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E08 power amplifier module × 3: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



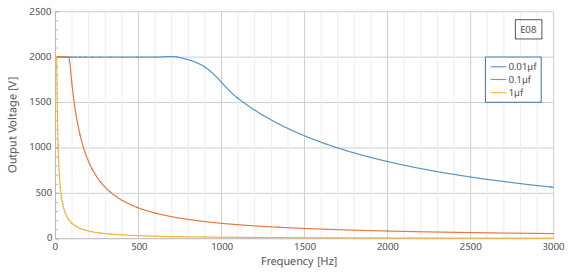
E01 Chassis & Power Supply Module × 1



Technical Data

Types		E01.A3（E08 module）
Power amplifier module	Channels	3
	Contol analog input	-2.5V~+7.5V
	Output voltage	-500V~+1500V
	Ripple	20mVpp（loading）
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	2kHz
	Ave.current	15mA
	Peak current	120mA
	Bandwidth (1/10 signal)	>3kHz
	Voltage gain	200
	Knob adjustment	-
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

BNC to fish clip line×3
(for analog input)

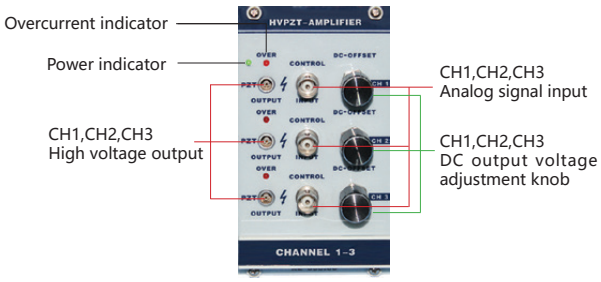
Aviation plug to fish clip×3

E01.A6 Piezo Amplifier（E03 module）

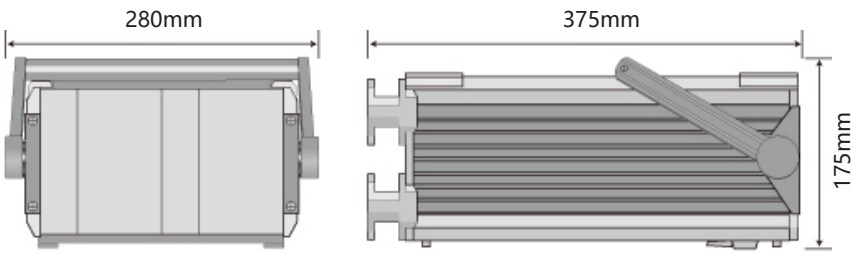
- 6 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E03 power amplifier module×2: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



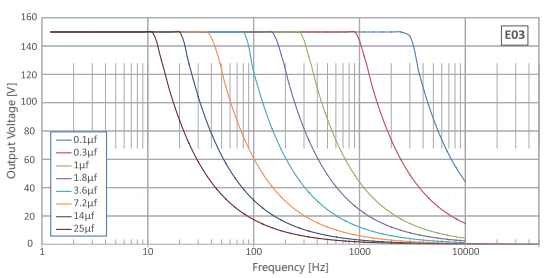
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.A6（E03 module）
Power amplifier module	Channels	6
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	58mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×6
(only for PZT with bare wires)

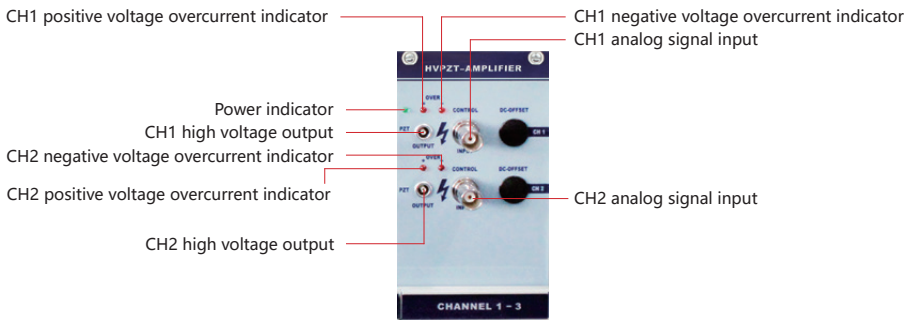
BNC to fish clip line×6
(for analog input)

E01.A6 Piezo Amplifier (E06 module, for piezo tube scanner)

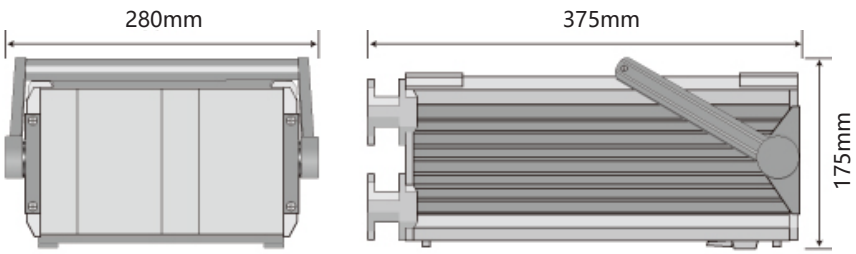
- 6 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E06 power amplifier module × 3: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



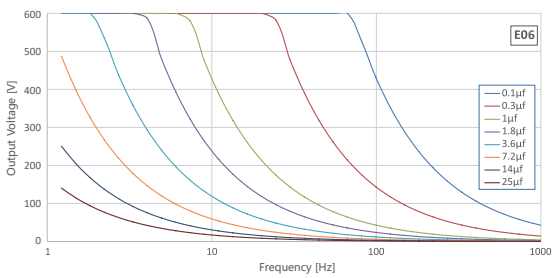
E01 Chassis & Power Supply Module × 1



Technical Data

Types		E01.A6 (E06 module)
Power amplifier module	Channels	6
	Contol analog input	-10~+10V
	Output voltage	-320~+320V
	Ripple	20mV
	Voltage stability	<0.1%F.S./8 hours
	Input impedance	100kΩ±20%
	Bandwidth	1kHz
	Ave.current	5mA
	Peak current	15mA
	Bandwidth (1/10 signal)	5kHz
	Voltage gain	32
Chassis & power supply module	Power supply	AC 220V±10% 50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×375×175mm
Function	Basic control way	Analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×6
(only for PZT with bare wires)

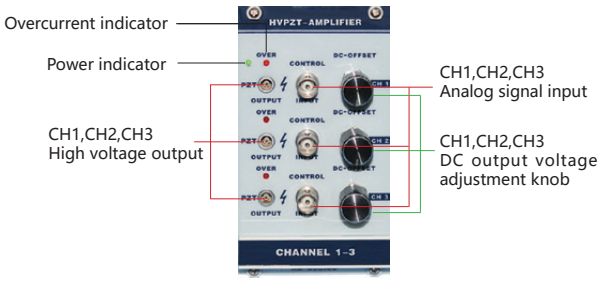
BNC to fish clip line×6
(for analog input)

E01.A9 Piezo Amplifier（E03 module）

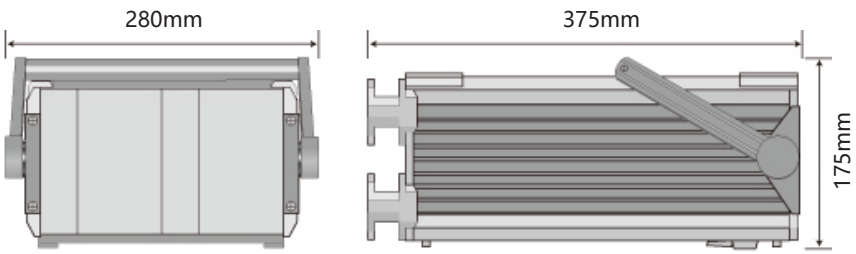
- 9 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E03 power amplifier module × 3: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



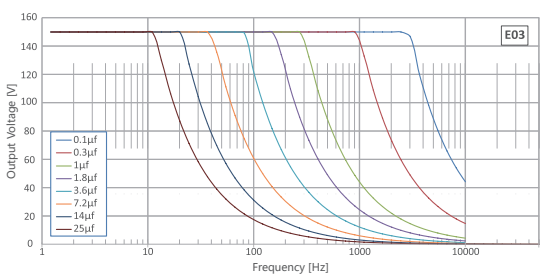
E01 Chassis & Power Supply Module × 1



Technical Data

Types		E01.A9（E03 module）
Power amplifier module	Channels	9
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	58mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×9
(only for PZT with bare wires)

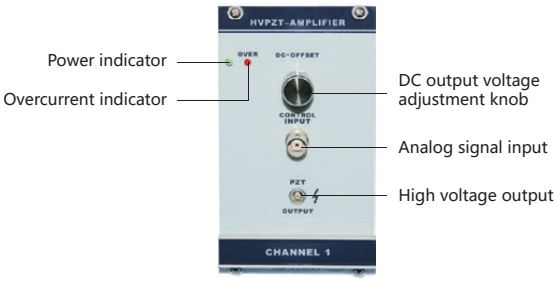
BNC to fish clip line×9
(for analog input)

E01.B1 Piezo Controller（E05 module）

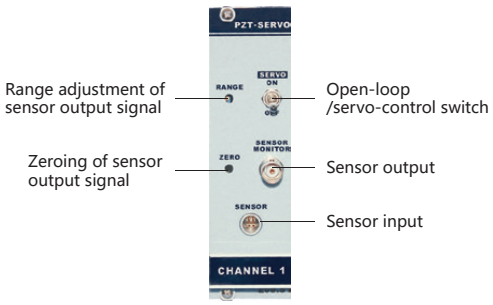
- 1 channel
- Analog control
- Knob control
- Servo control
- Software control
- Keyboard control

Combination Modules

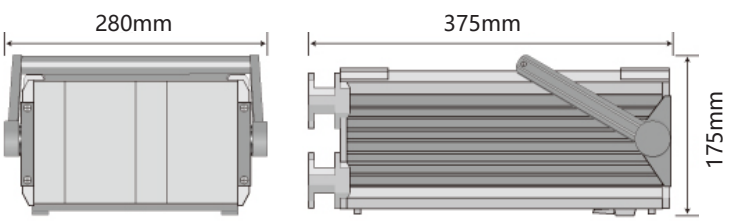
E05 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E09.S1 PZT sensor control module×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



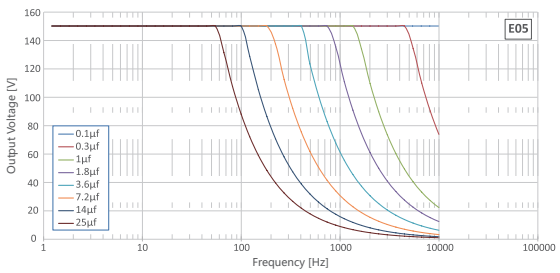
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.B1（E05 module）
Power amplifier module	Channels	1
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	291mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）
	Sensor channels	1
	Servo	Analog P-I+notch filter
	Sensor port	ERA.0S.304.CLL
	Sensor output port	BNC
	Output voltage	0~10V
	Operating temperature	0~50℃
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control, Open-loop/Servo control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

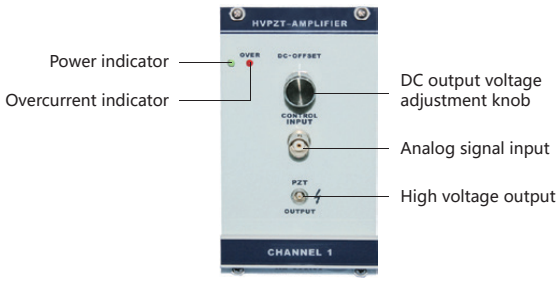
BNC to fish clip line×2
(1 for analog input, 1 for sensor output)

E01.B1 High Voltage Piezo Controller（E07 module, 1000V）

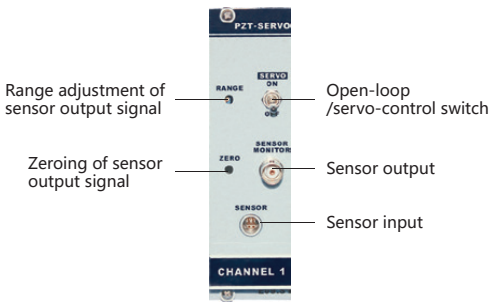
- 1 channel
- Analog control
- Knob control
- Servo control
- Software control
- Keyboard control

Combination Modules

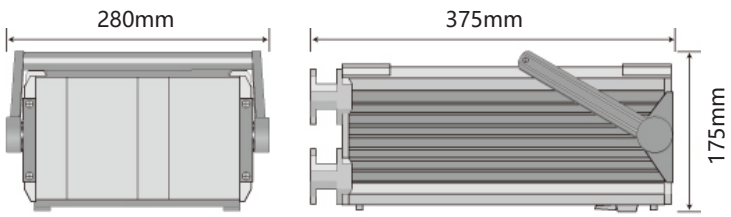
E07 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E09.S1 PZT sensor control module×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



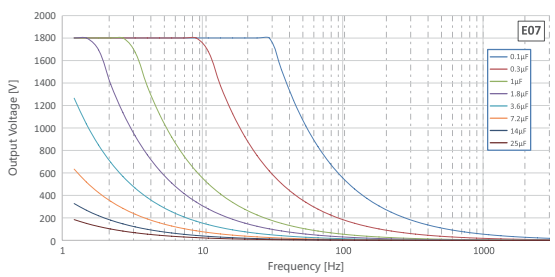
E01 Chassis & Power Supply Module×1



Technical Data

Type		E01.B1(E07 module，1000V)
Power amplifier module	Channels	1
	Contol analog input	0~10V
	Output voltage	0~1000V
	Ripple	50mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	2kHz
	Ave.current	30mA
	Peak current	500mA
	Voltage gain	100
	Knob adjustment	10 turns
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）
	Sensor channels	1
	Servo	Analog P-I+notch filter
	Sensor port	ERA.0S.304.CLL
	Sensor output port	BNC
	Output voltage	0~10V
	Operating temperature	0~50℃
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control, Open-loop/Servo control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

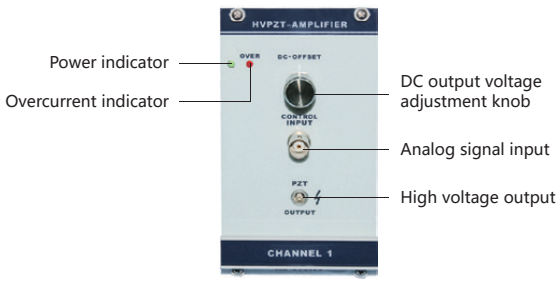
BNC to fish clip line×2
(1 for analog input, 1 for sensor output)

E01.B2 Piezo Controller（E05 module）

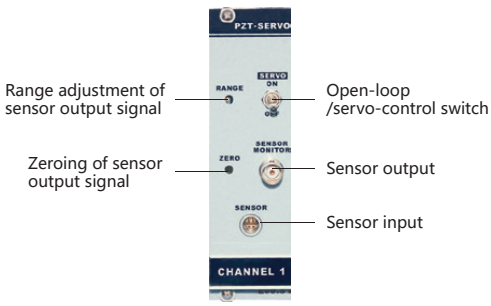
- 2 channels
- Analog control
- Knob control
- Servo control
- Software control
- Keyboard control

Combination Modules

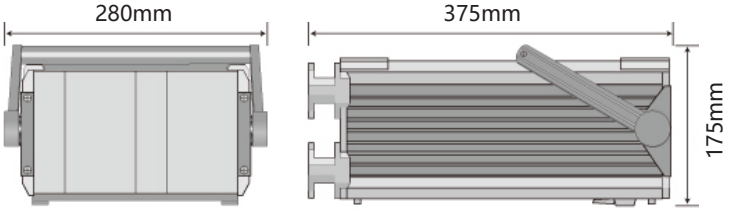
E05 power amplifier module×2: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E09.S1 PZT sensor control module×2: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



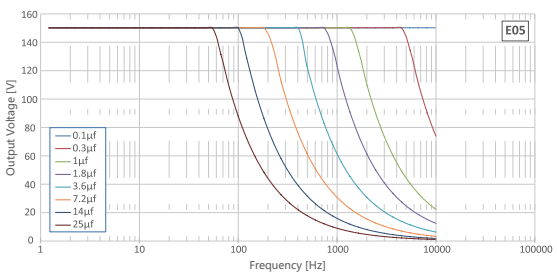
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.B2（E05 module）
Power amplifier module	Channels	2
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	291mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）
	Sensor channels	2
	Servo	Analog P-I+notch filter
	Sensor port	ERA.0S.304.CLL
	Sensor output port	BNC
	Output voltage	0~10V
	Operating temperature	0~50℃
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control, Open-loop/Servo control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

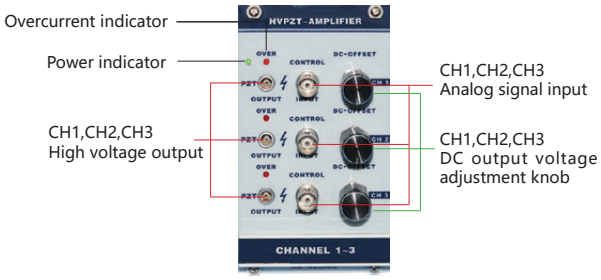
BNC to fish clip line×4
(2 for analog input, 2 for sensor output)

E01.B3 Piezo Controller（E03 module）

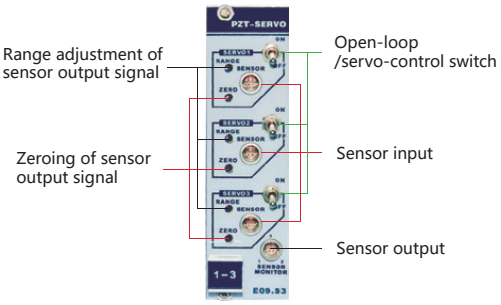
- 3 channels
- Analog control
- Knob control
- Servo control
- Software control
- Keyboard control

Combination Modules

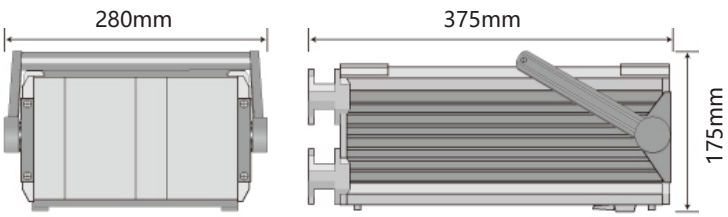
E03 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E09.S3 PZT sensor control module×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



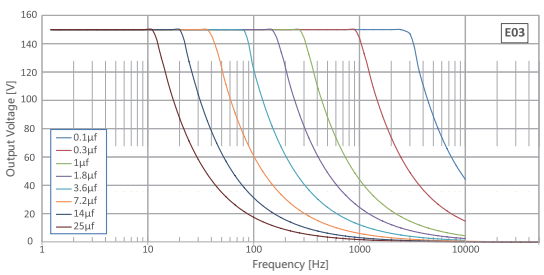
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.B3（E03 module）
Power amplifier module	Channels	3
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	58mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）
	Sensor channels	3
	Servo	Analog P-I+notch filter
	Sensor port	ERA.0S.304.CLL
	Sensor output port	ERA.0S.303.CLL
	Output voltage	0~10V
	Operating temperature	0~50℃
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control, Open-loop/Servo control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO line×1
(for sensor output)

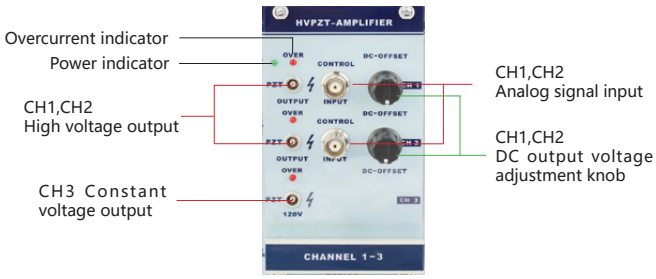
BNC to fish clip line×3
(for analog input)

E01.B3 Piezo Controller (E03 module, with constant output)

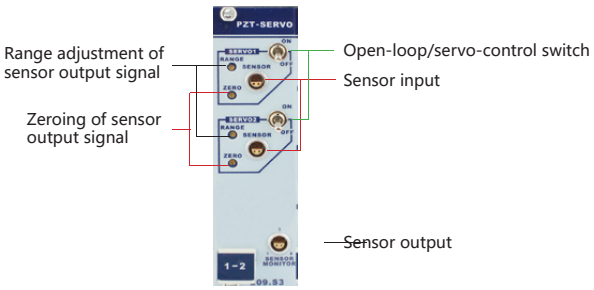
- 3 channels
- Analog control
- Knob control
- Servo control
- Software control
- Keyboard control

Combination Modules

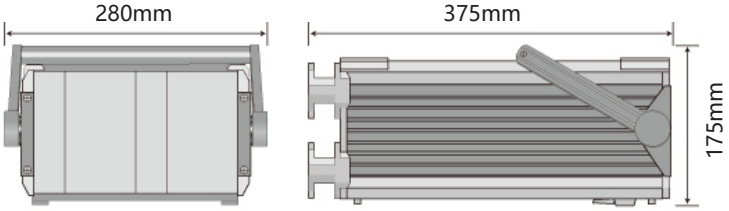
E03 power amplifier module (with constant output)×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E09.S3 PZT sensor control module (with constant output)×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



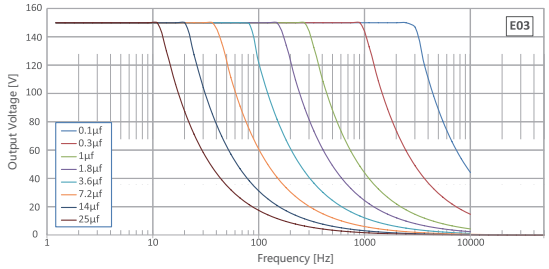
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.B3（E03 module, with constant output）
Power amplifier module	Channels	3
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）, the 3rd channel is constant voltage output
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	58mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）
	Sensor channels	3
	Servo	Analog P-I+notch filter
	Sensor port	ERA.0S.304.CLL
	Sensor output port	ERA.0S.303.CLL
	Output voltage	0~10V
	Operating temperature	0~50℃
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control, Open-loop/Servo control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO line×1
(for sensor output)

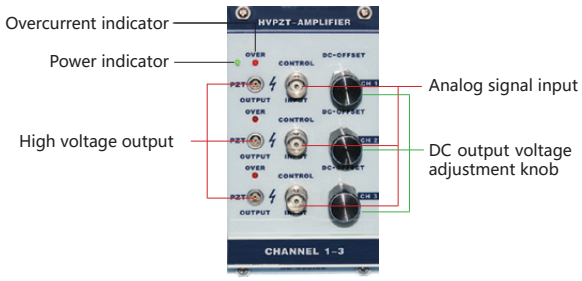
BNC to fish clip line×2
(for analog input)

E01.B4 Piezo Controller (E03, E05 module)

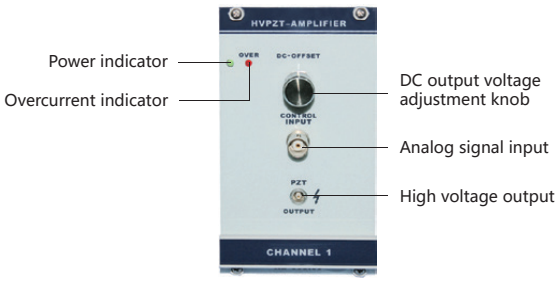
- 4 channels
- Analog control
- Knob control
- Servo control
- Software control
- Keyboard control

Combination Modules

E03 power amplifier module×1+E05 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.

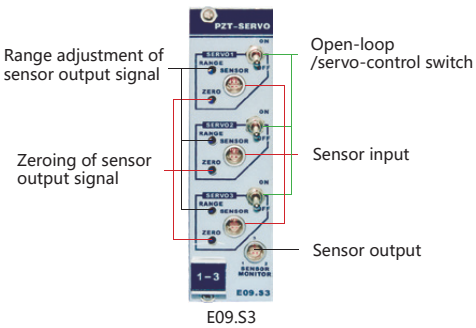


E03

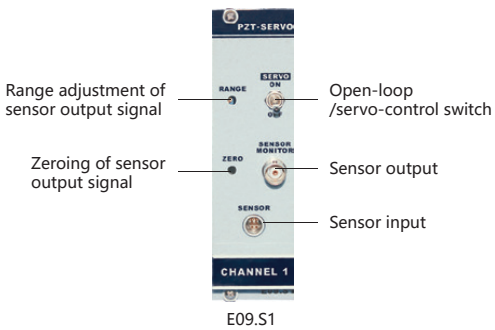


E05

E09.S3 PZT sensor control module×1+E09.S1 PZT sensor control module×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.

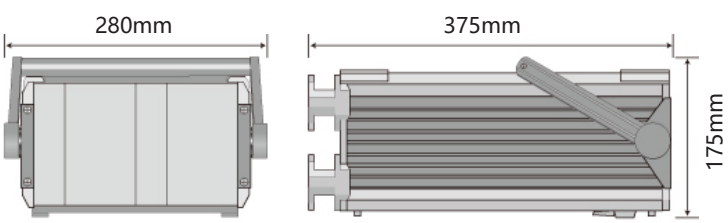


E09.S3



E09.S1

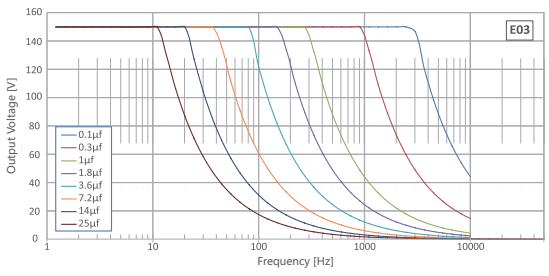
E01 Chassis & Power Supply Module×1

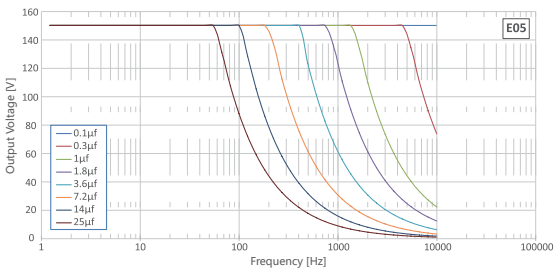


Technical Data

Types		E01.B4 (E03, E05 module)
Power amplifier module	Channels	4
	Contol analog input	-1.67~10V (Optional 0~5V)
	Output voltage	-20~120V (Optional -20~150V)
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)
	Ave.current	E03 module: 58mA, E05 module: 291mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
PZT sensor control module	Sensor type	SGS (Optional LVDT, CAP)
	Sensor channels	4
	Servo	Analog P-I+notch filter
	Sensor port	ERA.0S.304.CLL
	Sensor output port	E09.S1 module: BNC, E09.S3 module: ERA.0S.303.CLL
	Output voltage	0~10V
	Operating temperature	0~50℃
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control, Open-loop/Servo control

Voltage vs Frequency Curves





Included Cables

Power cable ×1

LEMO line×1
(for sensor output)

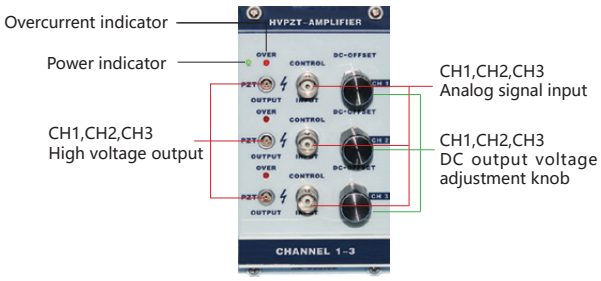
BNC to fish clip line×5
(4 for analog input, 1 for sensor output)

E01.B6 Piezo Controller (E03 module)

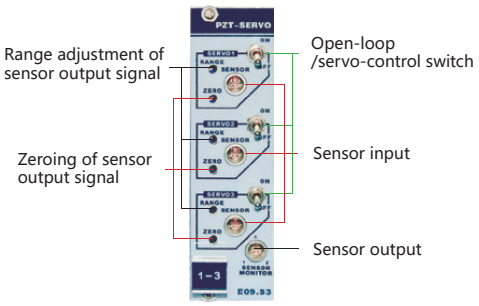
- 6 channels
- Analog control
- Knob control
- Servo control
- Software control
- Keyboard control

Combination Modules

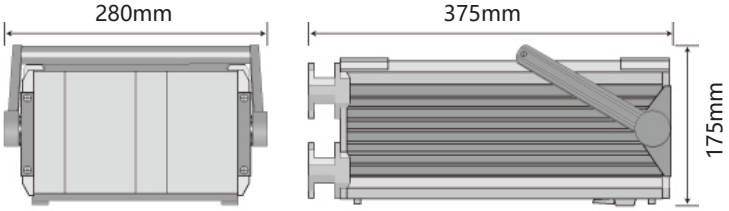
E03 power amplifier module × 2: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E09.S3 PZT sensor control module × 2: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



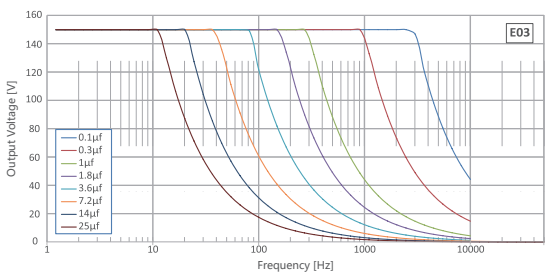
E01 Chassis & Power Supply Module × 1



Technical Data

Types		E01.B6 (E03 module)
Power amplifier module	Channels	6
	Contol analog input	-1.67~10V (Optional 0~5V)
	Output voltage	-20~120V (Optional -20~150V)
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)
	Ave.current	58mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
PZT sensor control module	Sensor type	SGS (Optional LVDT, CAP)
	Sensor channels	6
	Servo	Analog P-I+notch filter
	Sensor port	ERA.0S.304.CLL
	Sensor output port	ERA.0S.303.CLL
	Output voltage	0~10V
	Operating temperature	0~50℃
Chassis & power supply module	Power supply	AC 220V±10% , 50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control, Open-loop/Servo control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO line×2
(for sensor output)

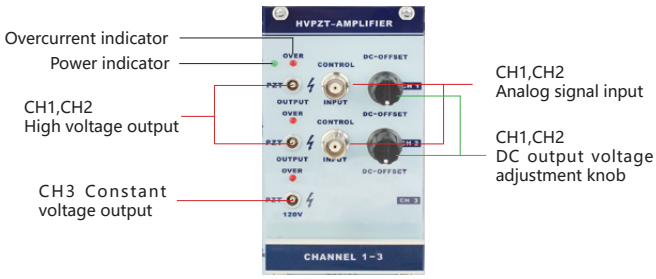
BNC to fish clip line×6
(for analog input)

E01.B6 Piezo Controller (E03 module, with constant output)

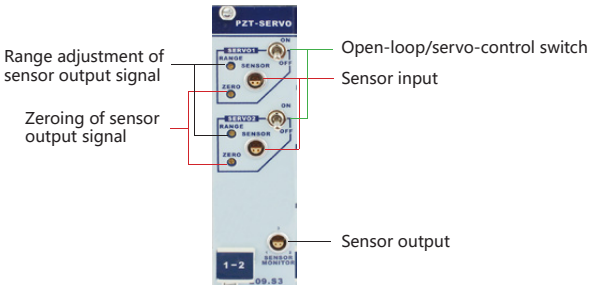
- 6 channels (2 constant outputs)
- Analog control
- Knob control
- Servo control
- Software control
- Keyboard control

Combination Modules

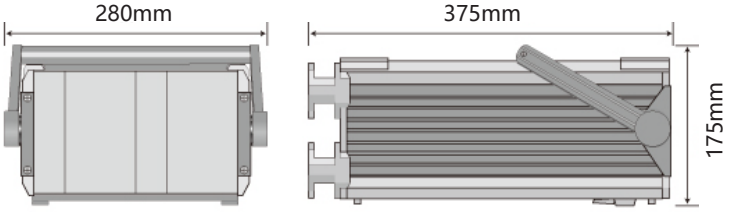
E03 power amplifier module (with constant output)×2: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E09.S3 PZT sensor control module(with constant output)×2: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



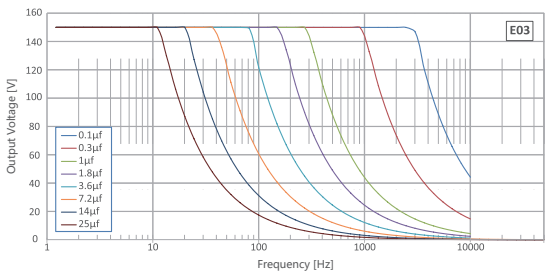
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.B6（E03 module, with constant output）
Power amplifier module	Channels	6
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）, the 3rd channel is constant voltage output
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	58mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）
	Sensor channels	6
	Servo	Analog P-I+notch filter
	Sensor port	ERA.0S.304.CLL
	Sensor output port	ERA.0S.303.CLL
	Output voltage	0~10V
	Operating temperature	0~50℃
Chassis & power supply module	Power supply	AC 220V±10% , 50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	280×175×375mm
Function	Basic control way	Manual adjustment, analog control, Open-loop/Servo control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO line×2
(for sensor output)

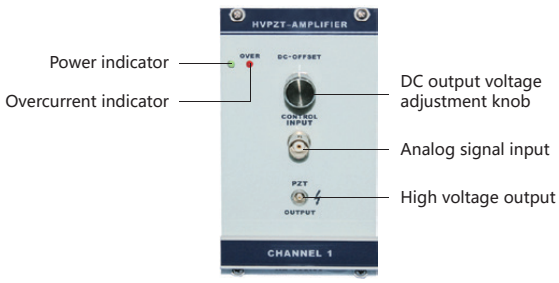
BNC to fish clip line×4
(for analog input)

E01.C1 Piezo Controller（E05 module）

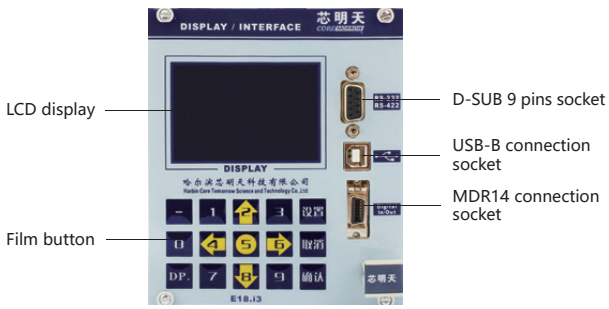
- 1 channel
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

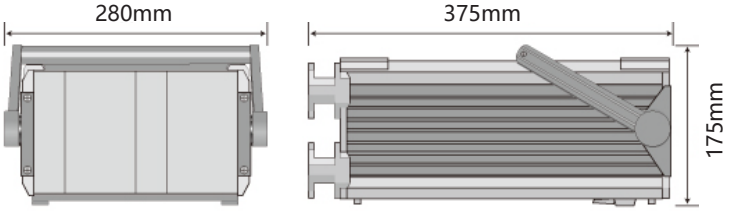
E05 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E18.i1 display & Interface module×1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



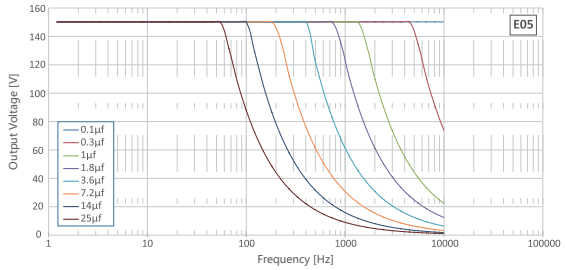
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.C1 (E05 module)	
Power amplifier module	Channels	1	
	Contol analog input	-1.67~10V (optional 0~5V)	
	Output voltage	-20~120V (optional -20~150V)	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz (optional 30k, 50kHz, etc.)	
	Ave.current	291mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
Display & interface module	Channels	1	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	280×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control	

Voltage vs Frequency Curves



Included Cables

Power cable ×1

BNC to fish clip line×1
(for analog input)

I/O line×1

USB line×1
(for communication)

LEMO to fish clip line×1
(only for PZT with bare wires)

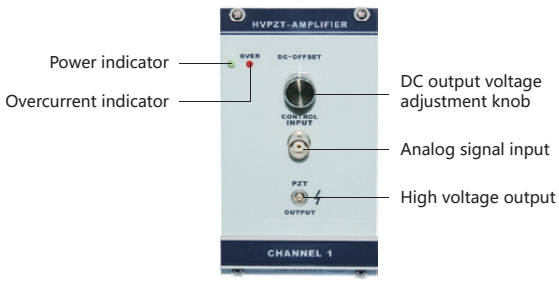
Series port line×1
(for communication)

E01.C1 Piezo Amplifier（E07 module，1000V）

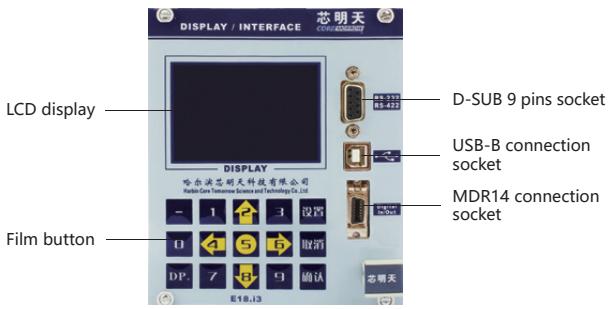
- 1 channel
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

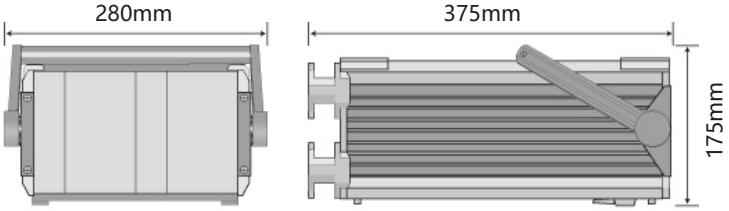
E07 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E18.i1 display & Interface module×1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



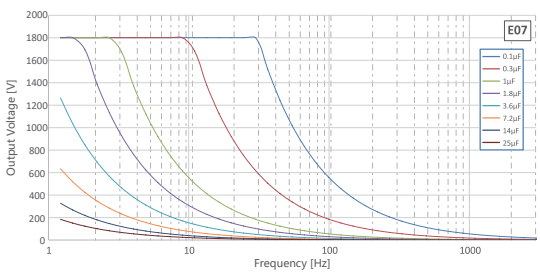
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.C1(E07 module，1000V)	
Power amplifier module	Channels	1	
	Contol analog input	0~10V	
	Output voltage	0~1000V	
	Ripple	50mV	
	Voltage stability	< 0.1%F.S. /8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	2kHz	
	Ave.current	30mA	
	Peak current	500mA	
	Voltage gain	100	
	Knob adjustment	10 turns	
Display & interface module	Channels	1	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10% , 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	280×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control	

Voltage vs Frequency Curves



Included Cables

Power cable ×1

BNC to fish clip line×1
(for analog input)

I/O line×1

USB line×1
(for communication)

LEMO cable×1
(only for PZT with bare wires)

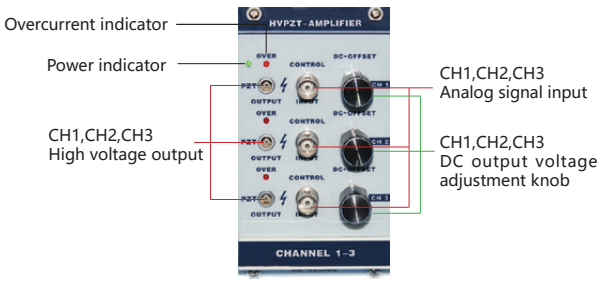
Series port line×1
(for communication)

E01.C3 Piezo Amplifier (E03 module)

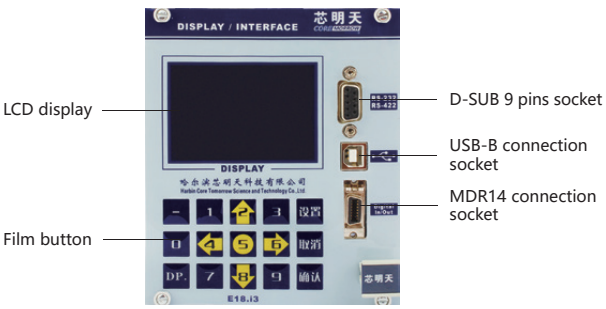
- 3 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

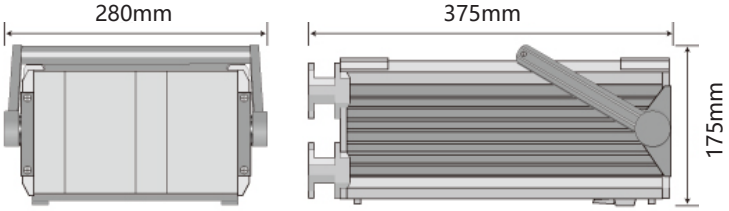
E03 power amplifier module × 1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E18.i3 display & Interface module × 1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



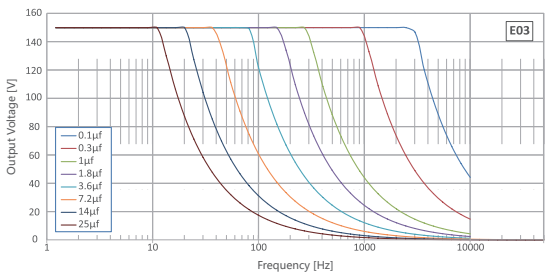
E01 Chassis & Power Supply Module × 1



Technical Data

Types		E01.C3 (E03 module)	
Power amplifier module	Channels	3	
	Contol analog input	-1.67~10V (Optional 0~5V)	
	Output voltage	-20~120V (Optional -20~150V)	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)	
	Ave.current	58mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	280×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control	

Voltage vs Frequency Curves



Included Cables


Power cable ×1


BNC to fish clip line×3
(for analog input)


I/O line×1


USB line×1
(for communication)


LEMO to fish clip line×3
(only for PZT with bare wires)

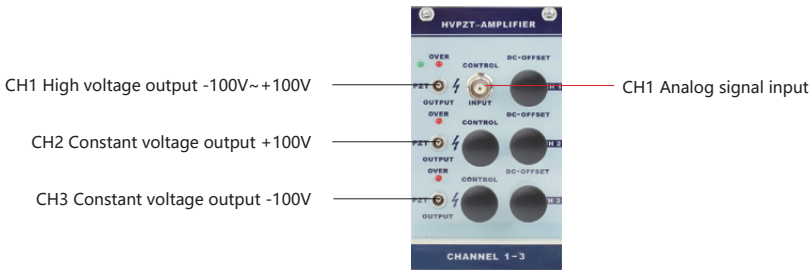

Series port line×1
(for communication)

E01.C3 Piezo Amplifier (For driving piezo benders)

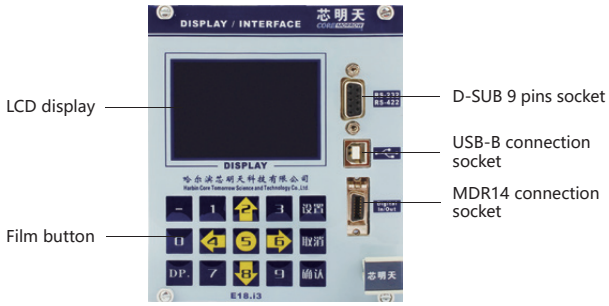
- 3 channels (2 constant voltage outputs and 1 variable voltage output)
- Analog control
- Software control
- Keyboard control
- Knob control
- Servo control

Combination Modules

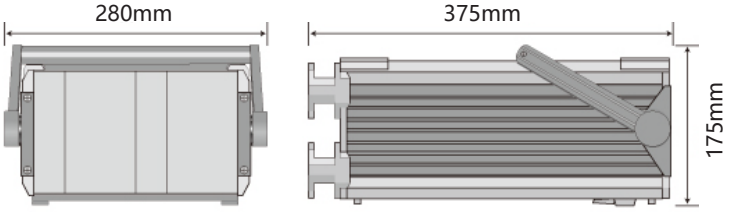
E03 power amplifier module×1(with constant voltage): Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E18.i3 display & Interface module×1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



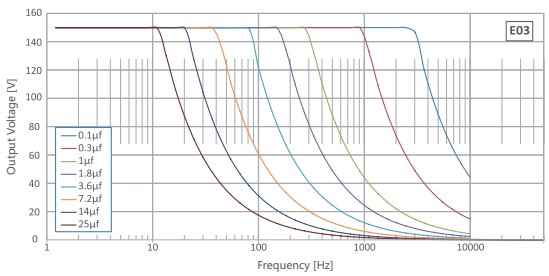
E01 Chassis & Power Supply Module×1



Technical Data

Types		E01.A3 (E03 module)	
Power amplifier module	Channels	3	
	CH1 contol analog input	-10V~+10V	
	CH1 output voltage	-100V~+100V	
	CH2 output voltage	+100V constant voltage	
	CH3 output voltage	-100V constant voltage	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz	
	Ave.current	35mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	10	
	Knob adjustment	-	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	280×175×375mm	
Function	Basic control way	Analog input, computer serial/USB interface, spontaneous waveform control	

Voltage vs Frequency Curves



Included Cables

Power cable ×1

BNC to fish clip line×1
(for analog input)

I/O line×1

USB line×1
(for communication)

LEMO to fish clip line×3
(only for PZT with bare wires)

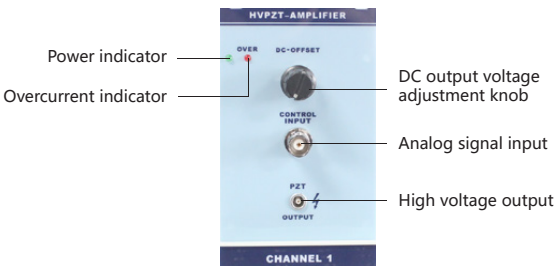
Series port line×1
(for communication)

E01.D1 Piezo Controller（E05 module）

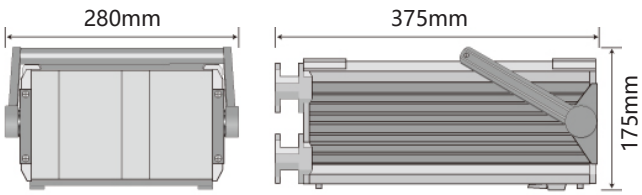
- 1 channel
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

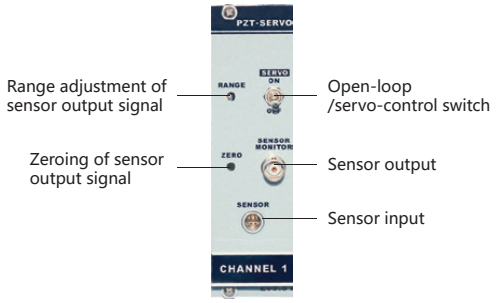
E05 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



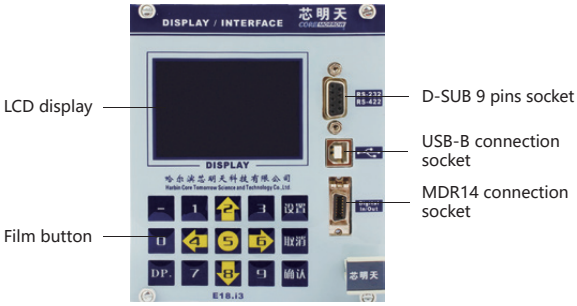
E01 Chassis & Power Supply Module×1



E09.S1PZT sensor control module×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



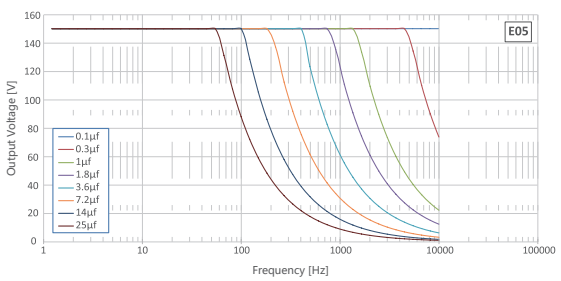
E18.i1 display & Interface module×1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E01.D1 (E05 module)	
Power amplifier module	Channels	1	
	Contol analog input	-1.67~10V (Optional 0~5V)	
	Output voltage	-20~120V (Optional -20~150V)	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)	
	Ave.current	291mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
PZT sensor control module	Sensor type	SGS (Optional LVDT, CAP)	
	Sensor channels	1	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	BNC	
	Sensor output votlage	0~10V	
Display & interface module	Channels	1	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	280×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves



Included Cables


Power cable ×1


I/O line×1


Series port line×1
(for communication)


USB line×1
(for communication)

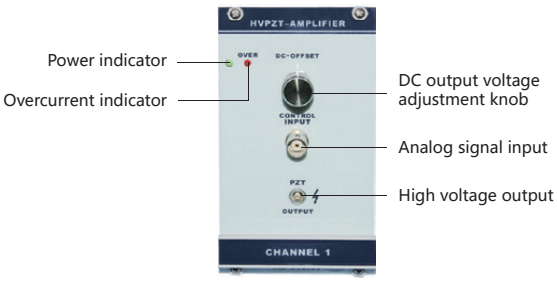

BNC to fish clip line×2
(1 for analog input, 1 for sensor output)

E01.D1 High Voltage Piezo Controller (E07 module, 1000V)

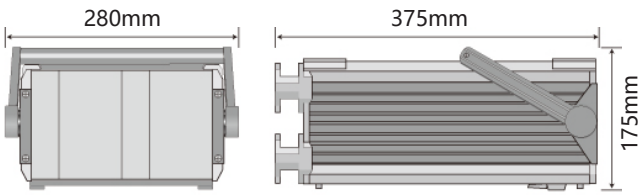
- 1 channel
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

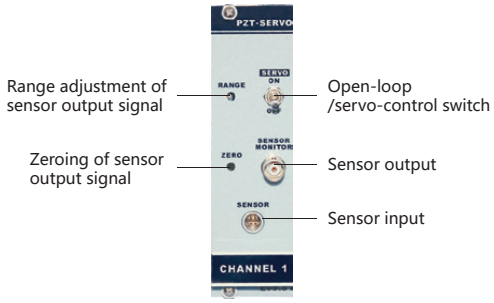
E07 power amplifier module × 1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



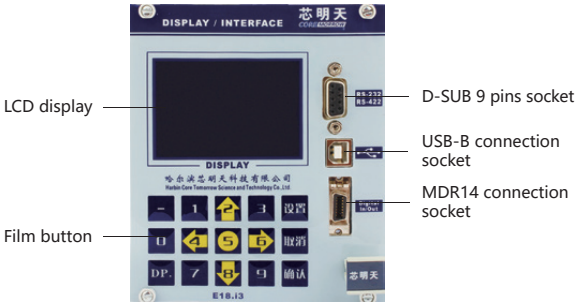
E01 Chassis & Power Supply Module × 1



E09.S1 PZT sensor control module × 1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



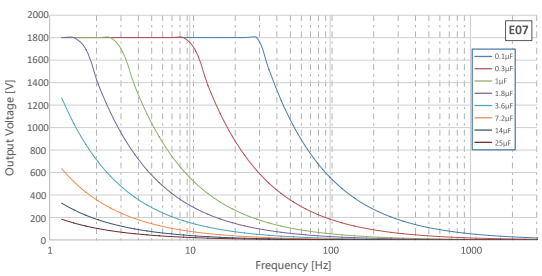
E18.i1 display & Interface module × 1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E01.D1(E07 module，1000V)	
Power amplifier module	Channels	1	
	Contol analog input	0~10V	
	Output voltage	0~1000V	
	Ripple	50mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	2kHz	
	Ave.current	30mA	
	Peak current	500mA	
	Bandwidth (1/10 signal)	100	
	Voltage gain	10 turns	
	Knob adjustment	SGS（Optional LVDT, CAP）	
PZT sensor control module	Sensor type	1	
	Sensor channels	Analog P-I+notch filter	
	Servo	ERA.0S.304.CLL	
	Sensor port	BNC	
	Sensor output port	0~10V	
	Sensor output votlage	0~50℃	
Display & interface module	Channels	1	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	280×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves



Included Cables

Power cable ×1

I/O line×1

Series port line×1
(for communication)

USB line×1
(for communication)

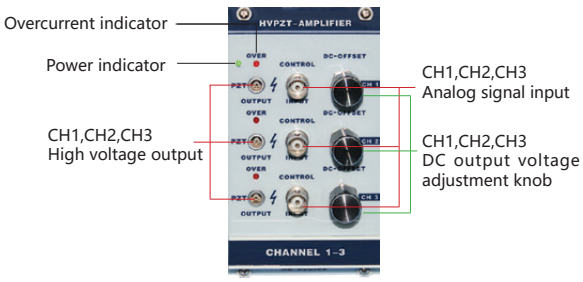
BNC to fish clip line×2
(1 for analog input, 1 for sensor output)

E01.D3 Piezo Controller（E03 module）

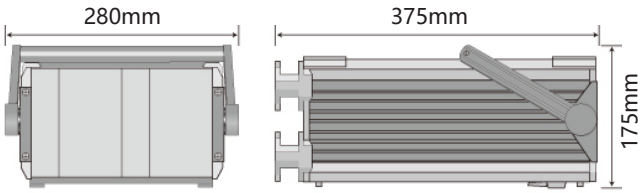
- 3 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

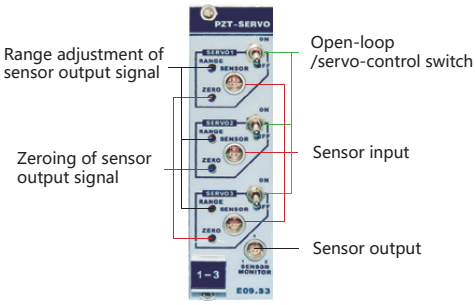
E03 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



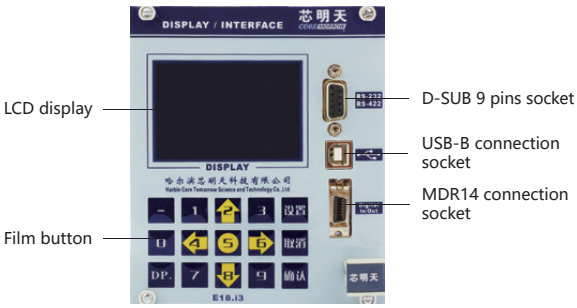
E01 Chassis & Power Supply Module×1



E09.S3 PZT sensor control module×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



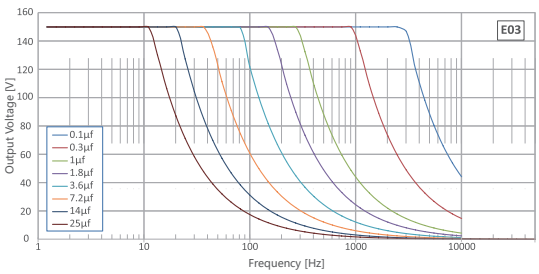
E18.i3 display & Interface module×1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E01.D3（E03 module）	
Power amplifier module	Channels	3	
	Contol analog input	-1.67~10V（Optional 0~5V）	
	Output voltage	-20~120V（Optional -20~150V）	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）	
	Ave.current	58mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）	
	Sensor channels	3	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	ERA.0S.303.CLL	
	Sensor output votlage	0~10V	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	280×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO line×1
(for sensor output)

I/O line×1

USB line×1
(for communication)

BNC to fish clip line×3
(for analog input)

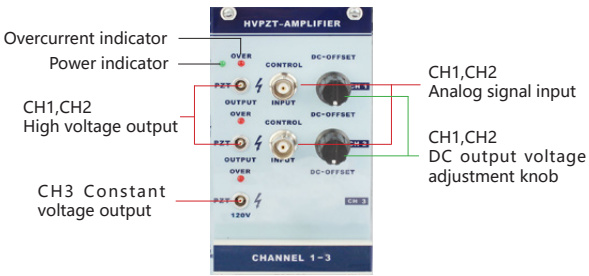
Series port line×1
(for communication)

E01.D3 Piezo Controller（E03 module）

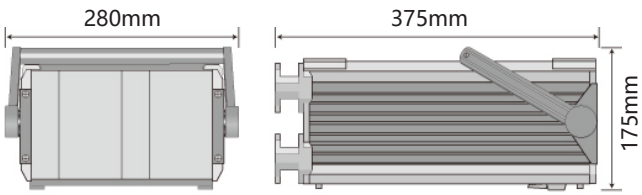
- 3 channels (1 contant output)
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

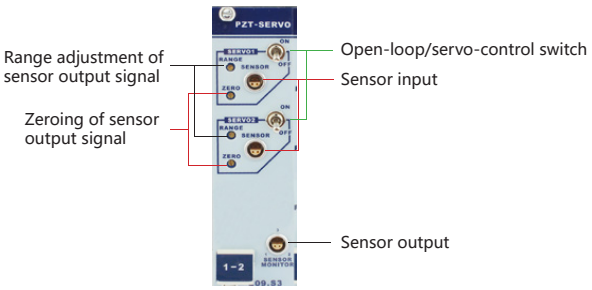
E03 power amplifier module(with constant output)×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



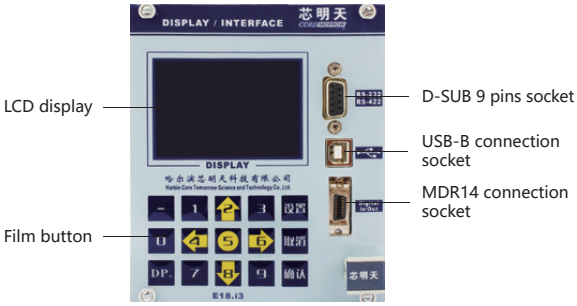
E01 Chassis & Power Supply Module×1



E09.S3 PZT sensor control module(with constant output)×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



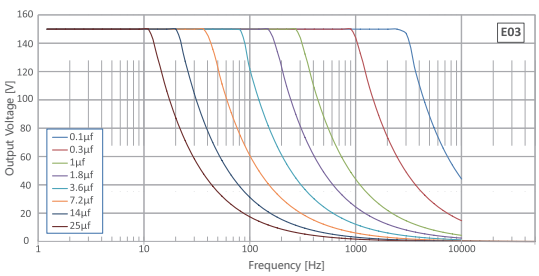
E18.i3 display & Interface module×1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E01.D3（E03 module, with constant output）	
Power amplifier module	Channels	3	
	Contol analog input	-1.67~10V（Optional 0~5V）	
	Output voltage	-20~120V（Optional -20~150V）, the 3rd channel is constant voltage output	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）	
	Ave.current	58mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）	
	Sensor channels	3	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	ERA.0S.303.CLL	
	Sensor output votlage	0~10V	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	280×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves



Included Cables


Power cable ×1


LEMO line×1
(for sensor output)


I/O line×1


USB line×1
(for communication)


BNC to fish clip line×2
(for analog input)

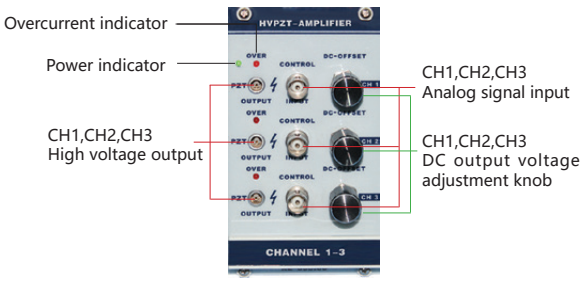

Series port line×1
(for communication)

E01.D4 Piezo Controller (E03, E05 module)

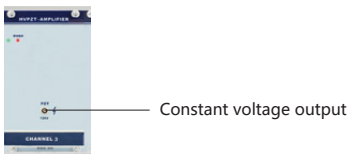
- 4 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

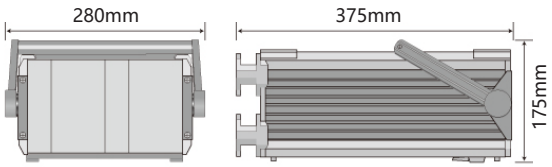
E03 power amplifier module(with constant output)×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



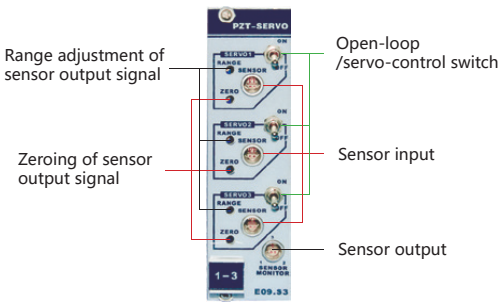
E05 constant voltage module ×1: The function of the module is to output constant voltage value, usually used for piezoelectric products requiring constant voltage control.



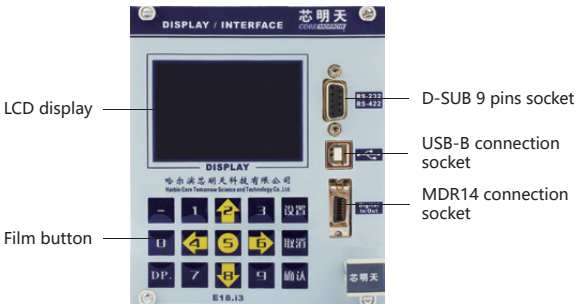
E01 Chassis & Power Supply Module×1



E09.S3 PZT sensor control module(with constant output)×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



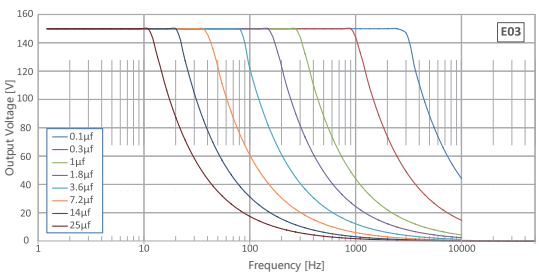
E18.i3 display & Interface module×1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E01.D4 (E03 and E05 module, with constant output)	
Power amplifier module	Channels	4 (Including one constant voltage output)	
	Contol analog input	-1.67~10V (Optional 0~5V)	
	Output voltage	-20~120V (Optional -20~150V) , Including one constant voltage output	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)	
	Ave.current	58mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
PZT sensor control module	Sensor type	SGS (Optional LVDT, CAP)	
	Sensor channels	3	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	ERA.0S.303.CLL	
	Sensor output votlage	0~10V	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	280×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves



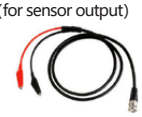
Included Cables


Power cable ×1


LEMO line×1
(for sensor output)


I/O line×1


USB line×1
(for communication)


BNC to fish clip line×2
(for analog input)


Series port line×1
(for communication)

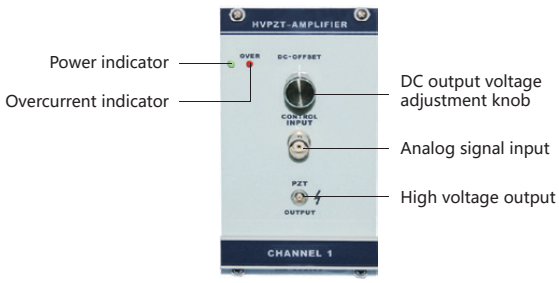
E00 Series Piezo Controller
19 Inch Chassis

E00.A6 Piezo Amplifier (E05 module)

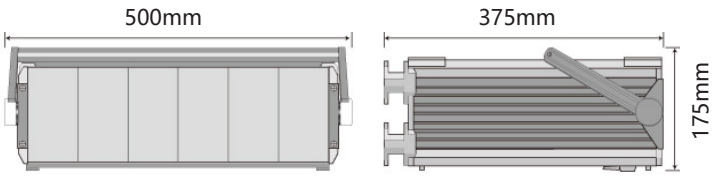
- 6 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E05 power amplifier module × 6: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



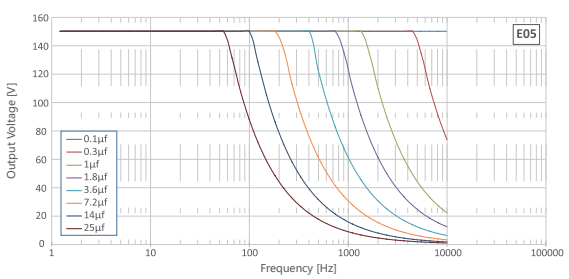
E00 Chassis & Power Supply Module × 1



Technical Data

Types		E00.A6（E05 module）
Power amplifier module	Channels	6
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	291mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	500×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×6
(only for PZT with bare wires)

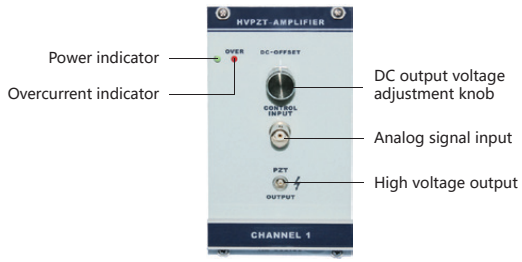
BNC to fish clip line×6
(for analog input)

E00.A6 Piezo Amplifier (E07 module)

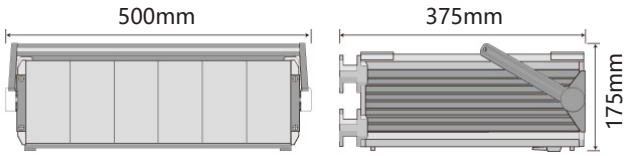
- 6 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E07 power amplifier module × 6: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



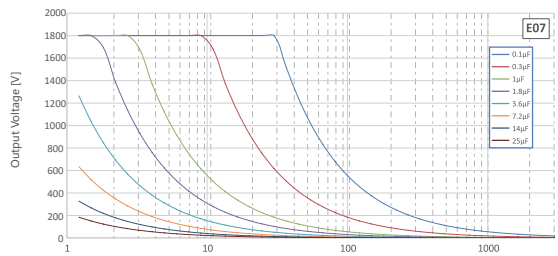
E00 Chassis & Power Supply Module × 1



Technical Data

Types		E00.A6 (E07 module)
Power amplifier module	Channels	6
	Contol analog input	-10~+10V(Optional 0~5V)
	Output voltage	-300~300V
	Ripple	10mV
	Voltage stability	< 0.01%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	3kHz
	Average power	25W
	Peak current	438mA
	Voltage gain	30
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10% , 50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	500×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×6
(only for PZT with bare wires)

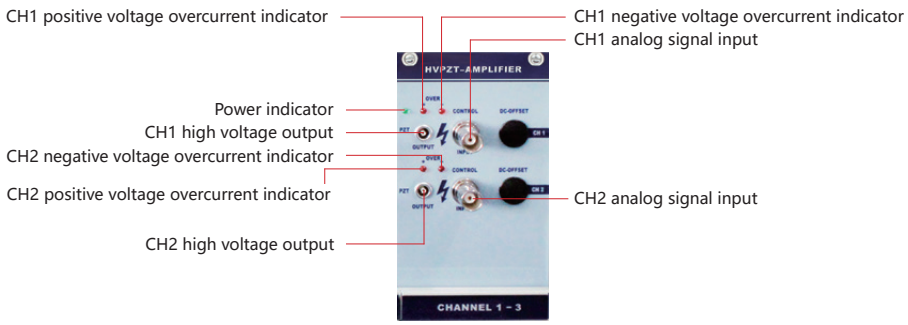
BNC to fish clip line×6
(for analog input)

E00.A12 Piezo Amplifier（E06 module, for piezo tube scanner）

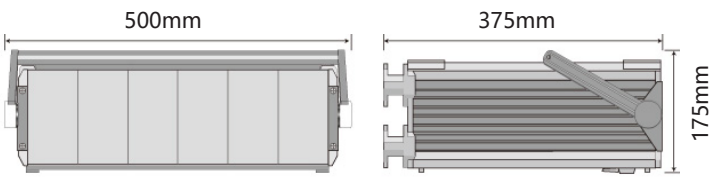
- 12 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E06 power amplifier module×6: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



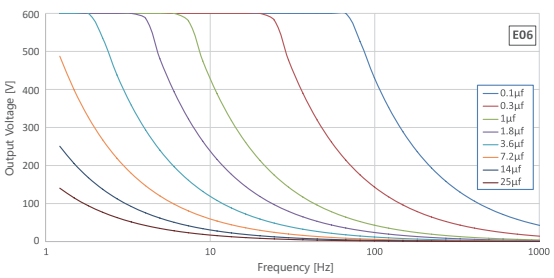
E00 Chassis & Power Supply Module×1



Technical Data

Types		E00.A12 (E06 module)
Power amplifier module	Channels	12
	Contol analog input	-10~+10V
	Output voltage	-320~+320V
	Ripple	20mV
	Voltage stability	<0.1%F.S./8 hours
	Input impedance	100kΩ±20%
	Bandwidth	1kHz
	Ave.current	5mA
	Peak current	15mA
	Bandwidth (1/10 signal)	5kHz
	Voltage gain	32
Chassis & power supply module	Power supply	AC 220V±10% 50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	500×375×175mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×12
(only for PZT with bare wires)

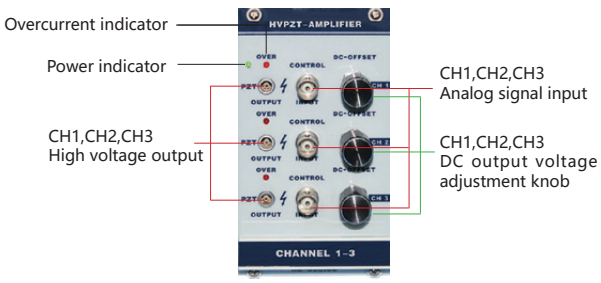
BNC to fish clip line×12
(for analog input)

E00.A18 Piezo Amplifier（E03 module）

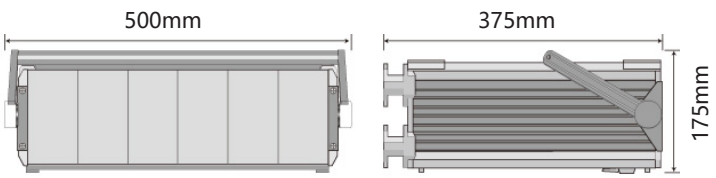
- 18 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

E03 power amplifier module×6: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



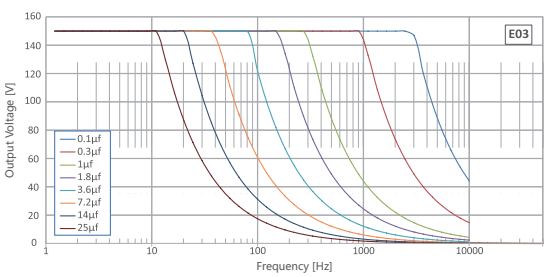
E00 Chassis & Power Supply Module×1



Technical Data

Types		E00.A18（E03 module）
Power amplifier module	Channels	18
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	58mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	500×175×375mm
Function	Basic control way	Manual adjustment, analog control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO to fish clip line×18
(only for PZT with bare wires)

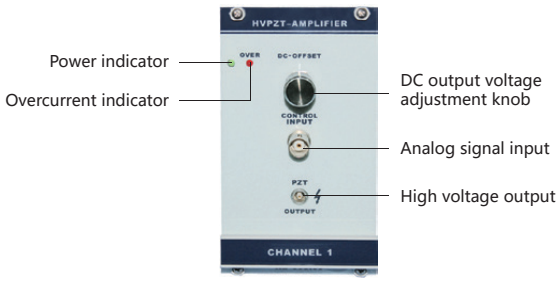
BNC to fish clip line×18
(for analog input)

E00.B4 Piezo Controller (E05 module)

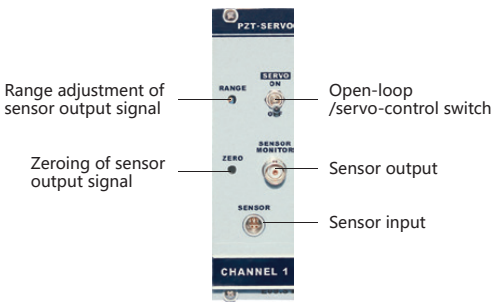
- 4 channels
- Analog control
- Knob control
- Servo control
- Software control
- Keyboard control

Combination Modules

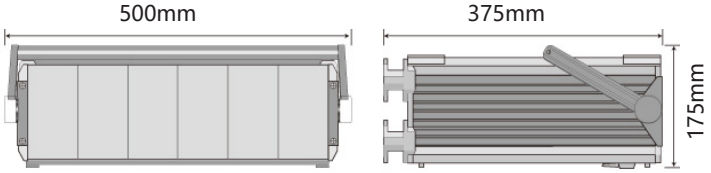
E05 power amplifier module × 4: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E09.S1 PZT sensor control module × 4: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



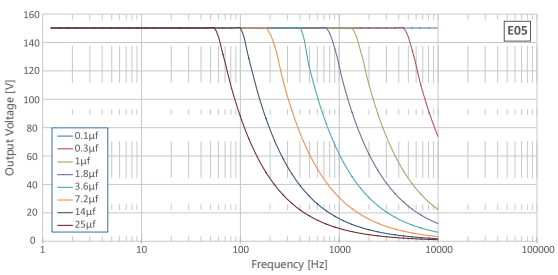
E00 Chassis & Power Supply Module × 1



Technical Data

Types		E00.B4（E05 module）
Power amplifier module	Channels	4
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	291mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）
	Sensor channels	4
	Servo	Analog P-I+notch filter
	Sensor port	ERA.0S.304.CLL
	Sensor output port	BNC
	Sensor output votlage	0~10V
	Operating temperature	0~50℃
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	500×175×375mm
Function	Basic control way	Manual adjustment, analog control, Open-loop/Servo control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

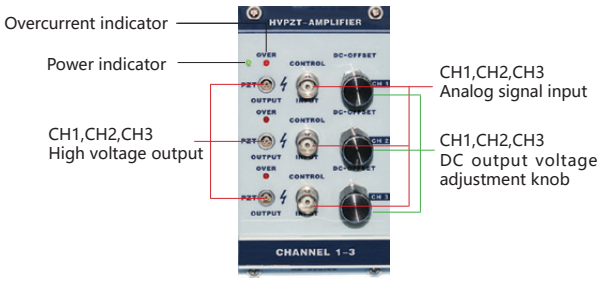
BNC to fish clip line×8
(4 for analog input, 4 for sensor output)

E00.B12 Piezo Controller (E03 module)

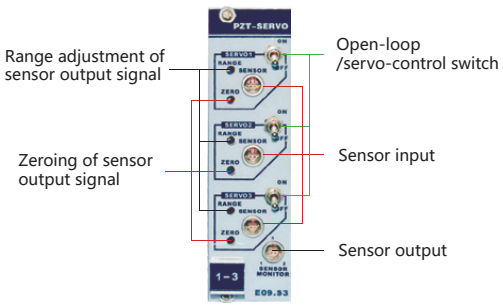
- 12 channels
- Analog control
- Knob control
- Servo control
- Software control
- Keyboard control

Combination Modules

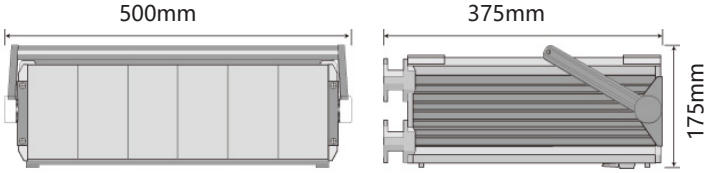
E03 power amplifier module × 4: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E09.S3 PZT sensor control module × 4: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



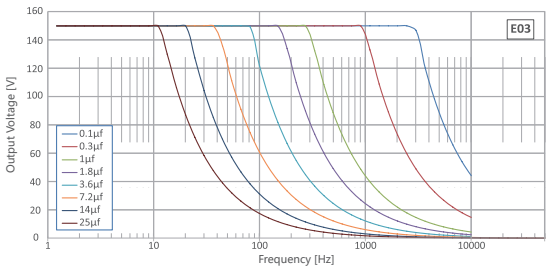
E00 Chassis & Power Supply Module × 1



Technical Data

Types		E00.B12（E03 module）
Power amplifier module	Channels	12
	Contol analog input	-1.67~10V（Optional 0~5V）
	Output voltage	-20~120V（Optional -20~150V）
	Ripple	5mV
	Voltage stability	< 0.1%F.S./8hours
	Input impedance	100KΩ±20%
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）
	Ave.current	58mA
	Peak current	1A
	Bandwidth (1/10 signal)	>20kHz
	Voltage gain	12
	Knob adjustment	10 turns
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）
	Sensor channels	12
	Servo	Analog P-I+notch filter
	Sensor port	ERA.0S.304.CLL
	Sensor output port	ERA.0S.303.CLL
	Sensor output votlage	0~10V
	Operating temperature	0~50℃
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%
	Current limit	Short-circuited proof
	L×H×D	500×175×375mm
Function	Basic control way	Manual adjustment, analog control, Open-loop/Servo control

Voltage vs Frequency Curves



Included Cables

Power cable ×1

LEMO line×4
(for sensor output)

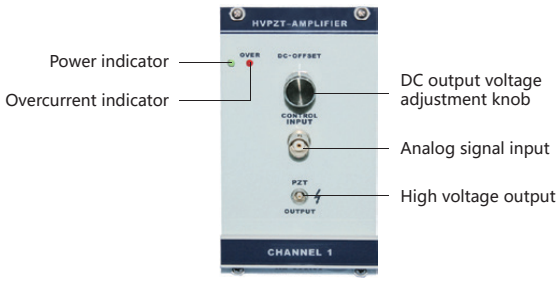
BNC to fish clip line×12
(for analog input)

E00.C2 Piezo Amplifier (E05 module)

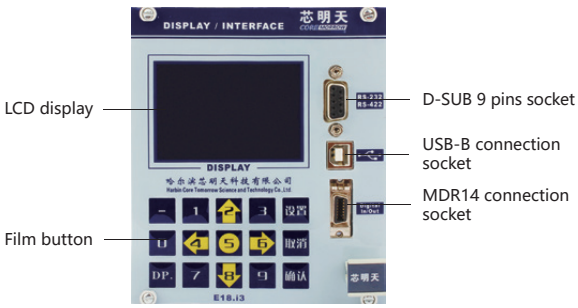
- 2 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

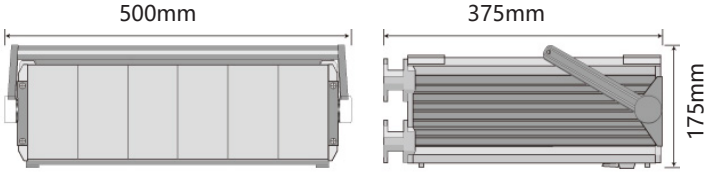
E05 power amplifier module × 2: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E18.i3 display & Interface module × 1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



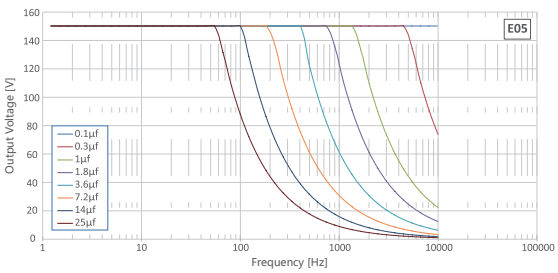
E00 Chassis & Power Supply Module × 1



Technical Data

Types		E00.C2（E05 module）	
Power amplifier module	Channels	2	
	Contol analog input	-1.67~10V（Optional 0~5V）	
	Output voltage	-20~120V（Optional -20~150V）	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）	
	Ave.current	291mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
Display & interface module	Channels	2	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control	

Voltage vs Frequency Curves



Included Cables

Power cable ×1

BNC to fish clip line×2
(for analog input)

I/O line×1

USB line×1
(for communication)

LEMO to fish clip line×2
(only for PZT with bare wires)

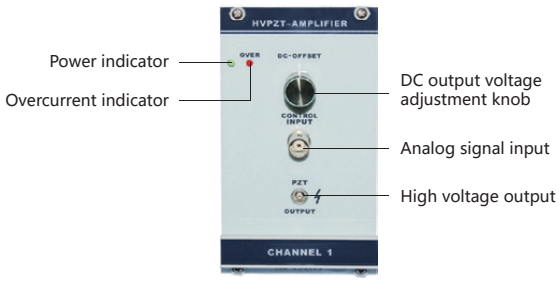
Series port line×1
(for communication)

E00.C3 Piezo Amplifier (E05 module)

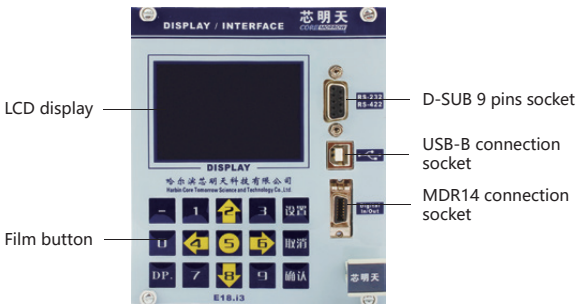
- 3 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

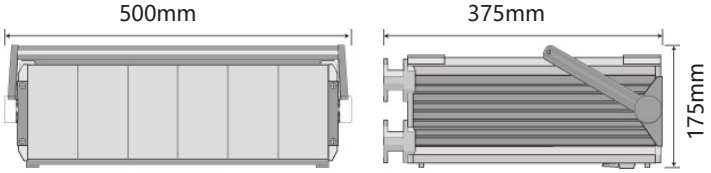
E05 power amplifier module × 3: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E18.i3 display & Interface module × 1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



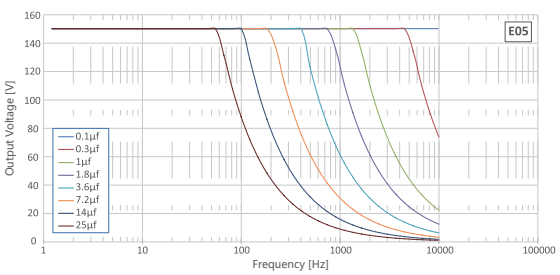
E00 Chassis & Power Supply Module × 1



Technical Data

Types		E00.C3（E05 module）	
Power amplifier module	Channels	3	
	Contol analog input	-1.67~10V（Optional 0~5V）	
	Output voltage	-20~120V（Optional -20~150V）	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）	
	Ave.current	291mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control	

Voltage vs Frequency Curves



Included Cables

Power cable ×1

BNC to fish clip line×3
(for analog input)

I/O line×1

USB line×1
(for communication)

LEMO to fish clip line×3
(only for PZT with bare wires)

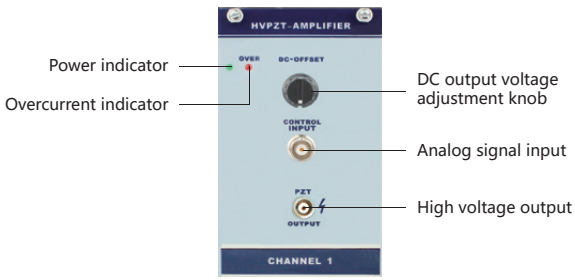
Series port line×1
(for communication)

E00.C3 Piezo Amplifier (E07 module)

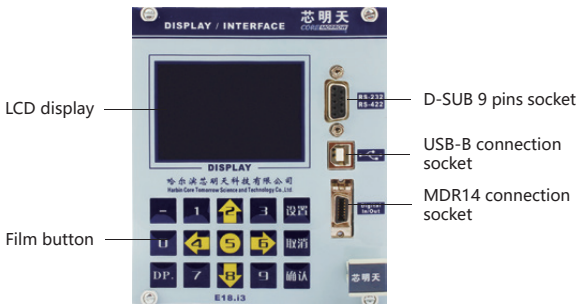
- 3 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

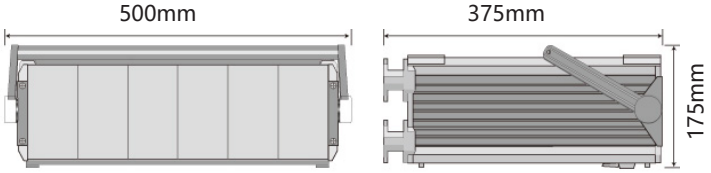
E07 power amplifier module × 3: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E18.i3 display & Interface module × 1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



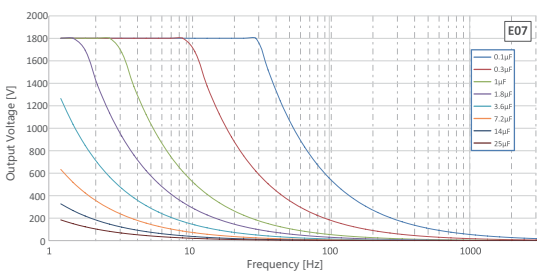
E00 Chassis & Power Supply Module × 1



Technical Data

Types		E00.C3（E07 module）	
Power amplifier module	Channels	3	
	Contol analog input	0~10V（Optional 0~5V）	
	Output voltage	0~1000V	
	Ripple	10mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	2kHz	
	Ave.current	30mA	
	Peak current	438A	
	Voltage gain	100	
	Knob adjustment	10 turns	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control	

Voltage vs Frequency Curves



Included Cables


Power cable ×1


BNC to fish clip line×3
(for analog input)


I/O line×1


USB line×1
(for communication)


LEMO cable×3
(Only for PZT with bare wires)

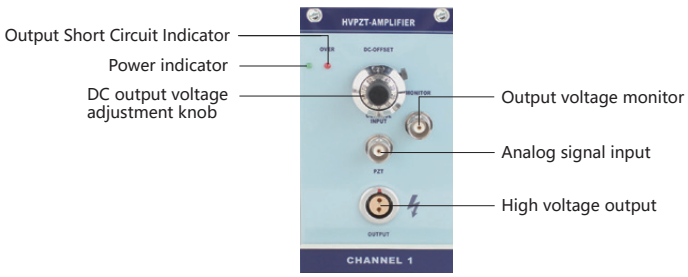

Series port line×1
(for communication)

E00.C3 High Voltage Piezo Amplifier (E08 module)

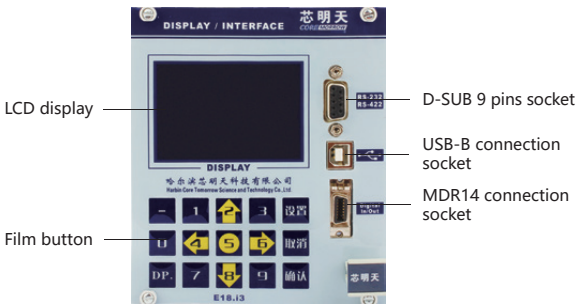
- 3 channels
- Analog control
- Software control
- Keyboard control
- Knob control

Combination Modules

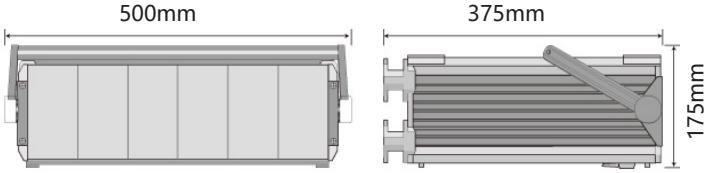
E08 power amplifier module × 3: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E18.i3 display & Interface module × 1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



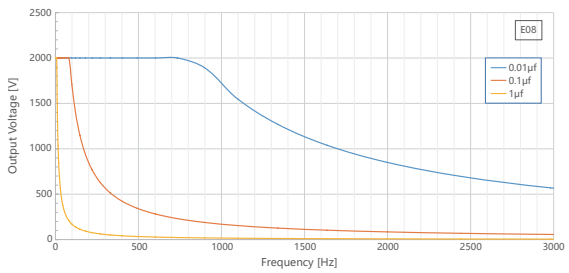
E00 Chassis & Power Supply Module × 1



Technical Data

Types		E00.C3 (E08 module)	
Power amplifier module	Channels	3	
	Contol analog input	-2.5V~+7.5V	
	Output voltage	-500V~+1500V	
	Ripple	20mVpp	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	3kHz	
	Ave.current	17mA	
	Peak current	120mA	
	Bandwidth (1/10 signal)	>3kHz	
	Voltage gain	200	
	Knob adjustment	-	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, Analog input, computer serial/USB interface, spontaneous waveform Control	

Voltage vs Frequency Curves



Included Cables


Power cable ×1


BNC to fish clip line×3
(for analog input)


I/O line×1


USB line×1
(for communication)


Aviation plug to fish clip×3

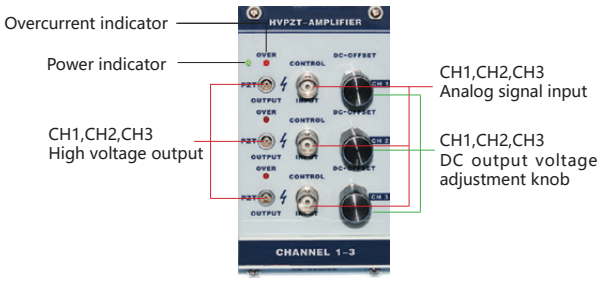

Series port line×1
(for communication)

E00.C6 Piezo Amplifier (E03 module)

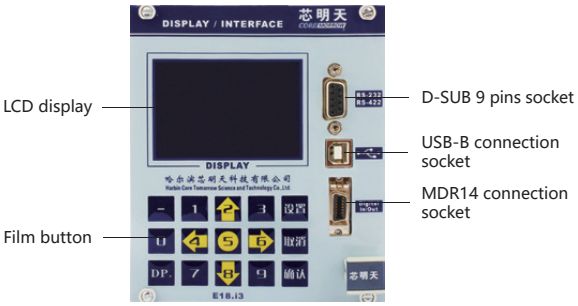
- 6 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

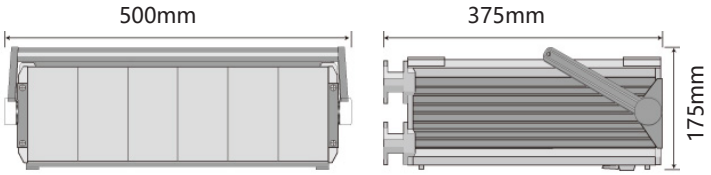
E03 power amplifier module × 2: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



E18.i3 display & Interface module × 2: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



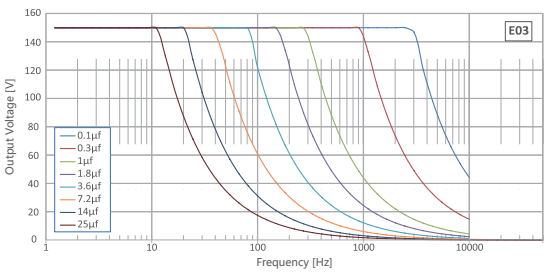
E00 Chassis & Power Supply Module × 1



Technical Data

Types		E00.C6（E03 module）	
Power amplifier module	Channels	6	
	Contol analog input	-1.67~10V（Optional 0~5V）	
	Output voltage	-20~120V（Optional -20~150V）	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）	
	Ave.current	58mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
Display & interface module	Channels	6	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control	

Voltage vs Frequency Curves



Included Cables


Power cable ×1


BNC to fish clip line×6
(for analog input)


I/O line×1


USB line×1
(for communication)


LEMO to fish clip line×6
(only for PZT with bare wires)


Series port line×1
(for communication)

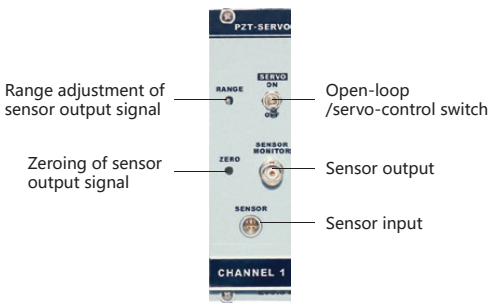
E00.D1 High Voltage Piezo Amplifier (E05 combination type)

- 1 channel
- Analog control
- Software control
- Keyboard control
- Servo control
- Knob control

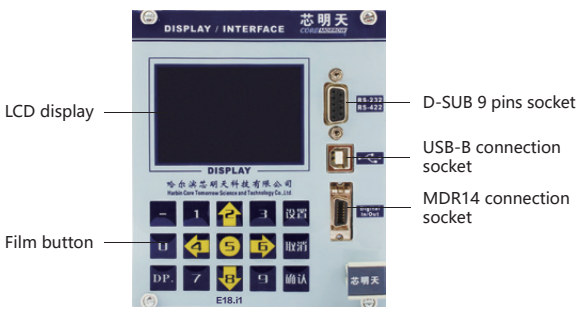
Combination Modules

E05 power amplifier module × 1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.

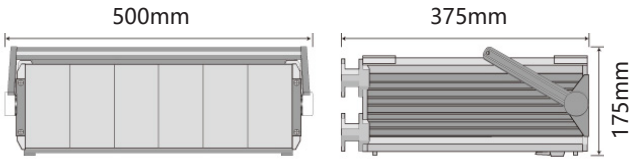
E09.S1 PZT sensor control module × 1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



E18.i1 display & Interface module × 1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



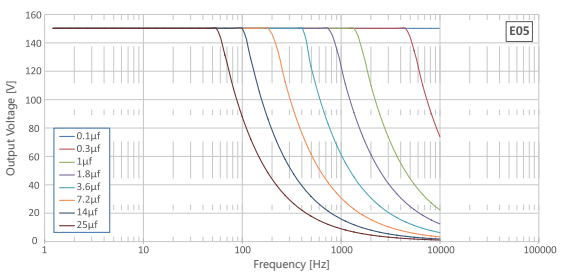
E00 Chassis & Power Supply Module×1



Technical Data

Types		E00.D1(E05 combination type)	
Power amplifier module	Channels	1 (combination type)	
	Contol analog input	0~10V	
	Output voltage	0~800V	
	Ripple	20mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	5kHz (-3DB)	
	Ave.current	100mA	
	Peak current	300mA	
	Voltage gain	80	
	Knob adjustment	No	
PZT sensor control module	Sensor type	SGS（Optional LVDT、CAP）	
	Sensor channels	1	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	BNC	
	Sensor output votlage	0~10V	
Display & interface module	Channels	1	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422、USB	
	Bandrate	9600、19200、38400、57600、76800、115200 、128000、230400、256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Analog input, computer serial/USB interface, spontaneous waveform control	

Voltage vs Frequency Curves



Included Cables


Power cable ×1


I/O line×1


Series port line×1
(for communication)


USB line×1
(for communication)

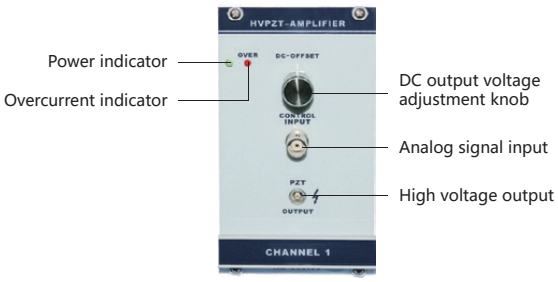

BNC to fish clip line×2
(1 for analog input, 1 for sensor output)

E00.D3 Piezo Controller（E05 module）

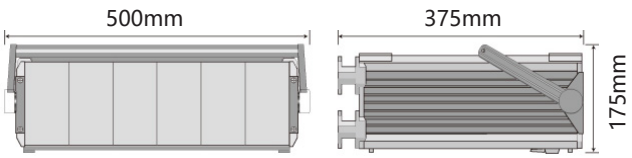
- 3 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

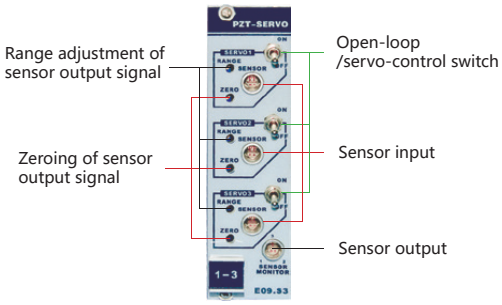
E05 power amplifier module×3: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



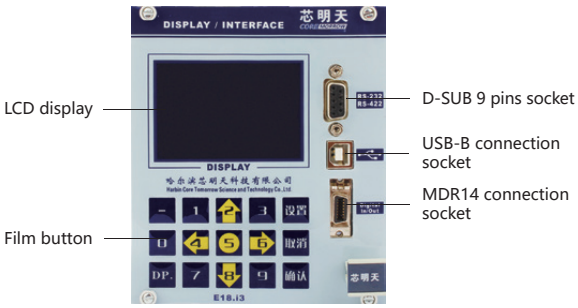
E00 Chassis & Power Supply Module×1



E09.S3 PZT sensor control module×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



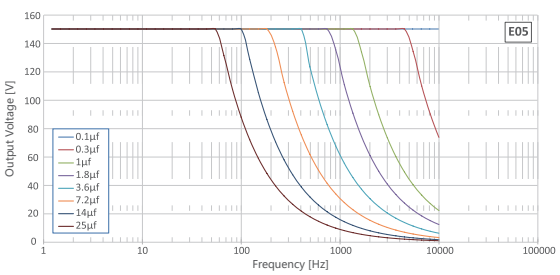
E18.i3 display & Interface module×1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E00.D3（E05 module）	
Power amplifier module	Channels	3	
	Contol analog input	-1.67~10V（Optional 0~5V）	
	Output voltage	-20~120V（Optional -20~150V）	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）	
	Ave.current	291mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）	
	Sensor channels	3	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	ERA.0S.303.CLL	
	Sensor output votlage	0~10V	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves



Included Cables


Power cable ×1


BNC to fish clip line×3
(for analog input)


I/O line×1


USB line×1
(for communication)


LEMO line×1
(for sensor output)

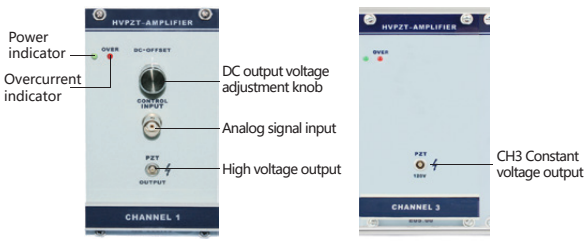

Series port line×1
(for communication)

E00.D3 Piezo Controller（E05 module, with constant output）

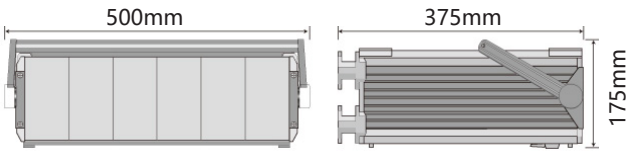
- 3 channels (1 constant output)
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

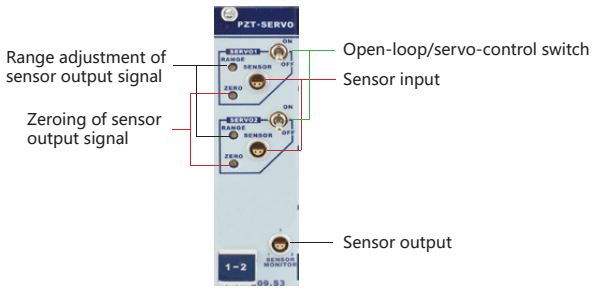
E05 power amplifier module×2+E05 constant output module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



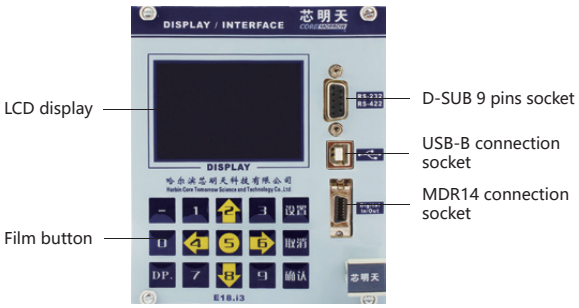
E00 Chassis & Power Supply Module×1



E09.S3 PZT sensor control module(with constant output)×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



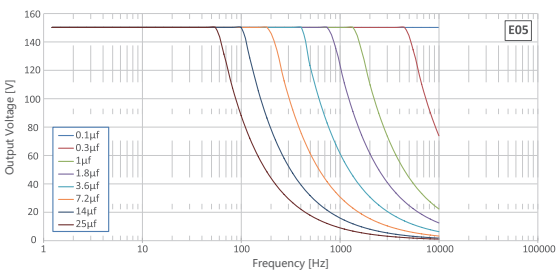
E18.i3 display & Interface module×1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E00.D3 (E05 module, with constant output)	
Power amplifier module	Channels	3	
	Contol analog input	-1.67~10V (Optional 0~5V)	
	Output voltage	-20~120V (Optional -20~150V) , the 3rd channel is constant voltage output	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)	
	Ave.current	291mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
PZT sensor control module	Sensor type	SGS (Optional LVDT, CAP)	
	Sensor channels	3	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	ERA.0S.303.CLL	
	Sensor output votlage	0~10V	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves



Included Cables

Power cable ×1

BNC to fish clip line×2
(for analog input)

I/O line×1

USB line×1
(for communication)

LEMO line×1
(for sensor output)

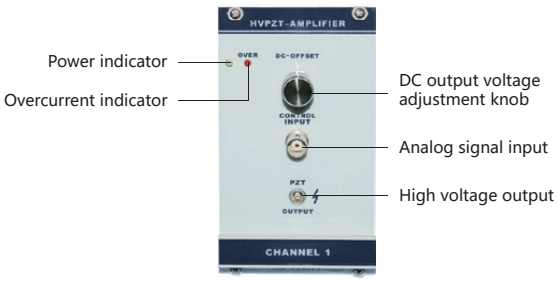
Series port line×1
(for communication)

E00.D3 Piezo Controller（E05 module，CAP Sensor）

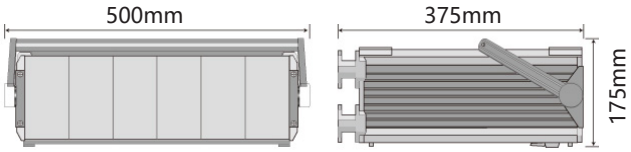
- 3 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

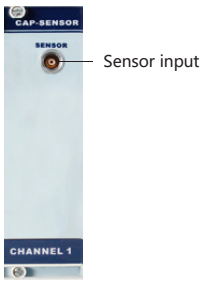
E05 power amplifier module×3: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



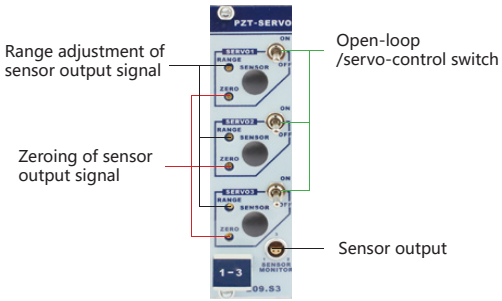
E00 Chassis & Power Supply Module×1



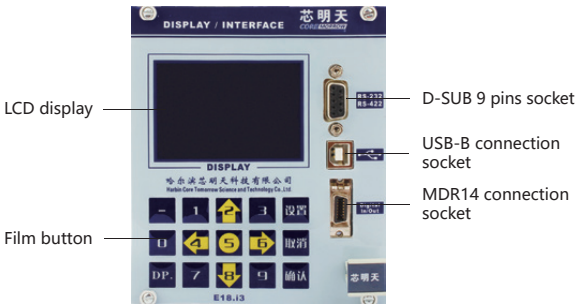
E09.C1 PZT sensor control module×3: This module is used to convert the capacitance value between the capacitive sensor and the measured object into a voltage value through the internal circuit, and feed it back to the E09. S3 sensor servo control module.



E09.S3 PZT sensor control module×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



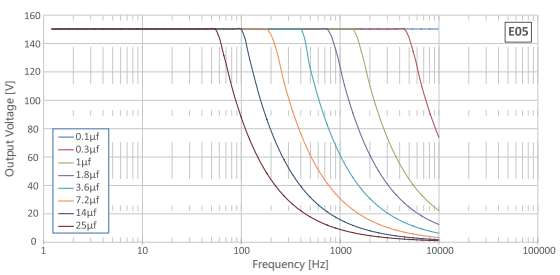
E18.i3 display & Interface module×1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E00.D3 (E05 module, CAP Sensor)	
Power amplifier module	Channels	3	
	Contol analog input	-1.67~10V (Optional 0~5V)	
	Output voltage	-20~120V (Optional -20~150V)	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)	
	Ave.current	291mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
E09.S3 PZT sensor control module	Sensor type	CAP	
	Sensor channels	3	
	Servo	Analog P-I+notch filter	
	Sensor output port	ERA.0S.303.CLL	
	Sensor output votlage	0~10V	
E09.C1 CAP sensor module	Sensor type	CAP	
	Channels/module	1	
	Sensor input port	G10S0C-FT1LJG0-000L	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	10~50℃	
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves



Included Cables


Power cable×1


BNC to fish clip line×3
(for analog input)


I/O line×1


USB line×1
(for communication)


LEMO line×1
(for sensor monitor)

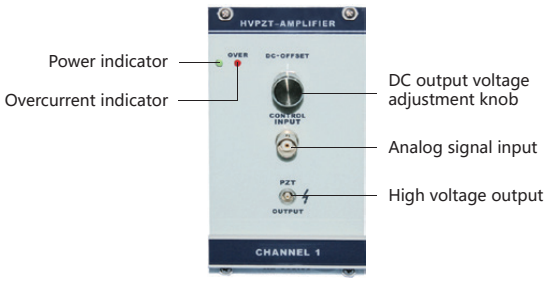

Series port line×1
(for communication)

E00.D3 Piezo Amplifier (E07 module)

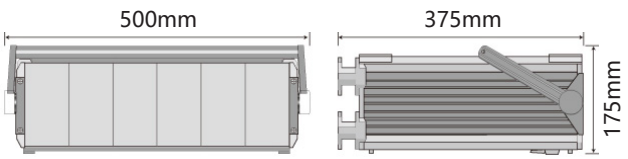
- 3 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

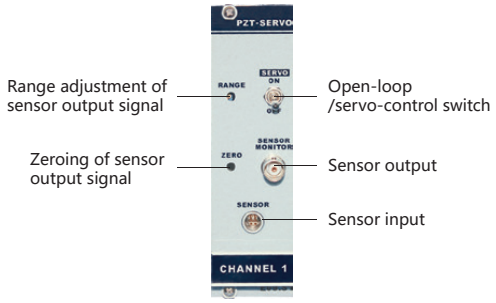
E07 power amplifier module × 3: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



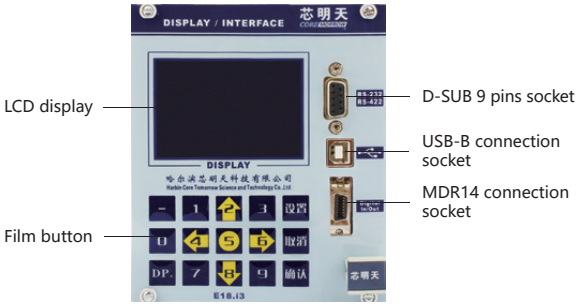
E00 Chassis & Power Supply Module × 1



E09.S1 PZT sensor control module × 3: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



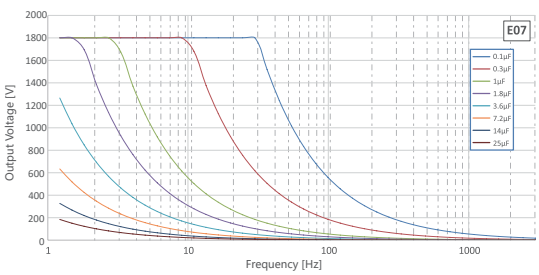
E18.i3 display & Interface module × 1: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E00.D3（E07 module）	
Power amplifier module	Channels	3	
	Contol analog input	0~10V（Optional 0~5V）	
	Output voltage	0~1000V	
	Ripple	10mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	2kHz	
	Ave.current	30mA	
	Peak current	438A	
	Voltage gain	100	
	Knob adjustment	10 turns	
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）	
	Sensor channels	3	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	ERA.0S.303.CLL	
	Sensor output votlage	0~10V	
Display & interface module	Channels	3	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control	

Voltage vs Frequency Curves



Included Cables

Power cable ×1

BNC to fish clip line×3
(for analog input sensor monitoring)

I/O line×1

USB line×1
(for communication)

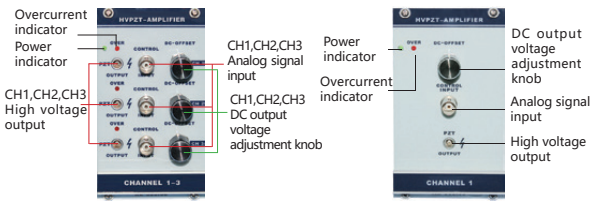
Series port line×1
(for communication)

E00.D4 Piezo Controller（E03, E05 modules）

- 4 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

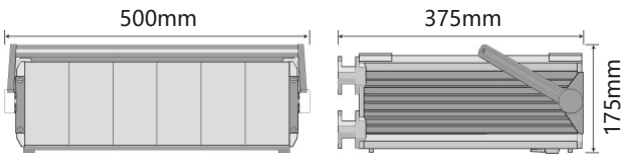
Combination Modules

E03 power amplifier module×1+E05 power amplifier module×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.

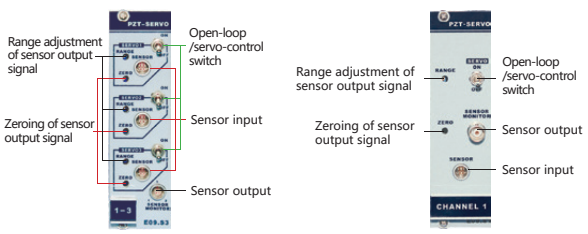


E03 E05

E00 Chassis & Power Supply Module×1

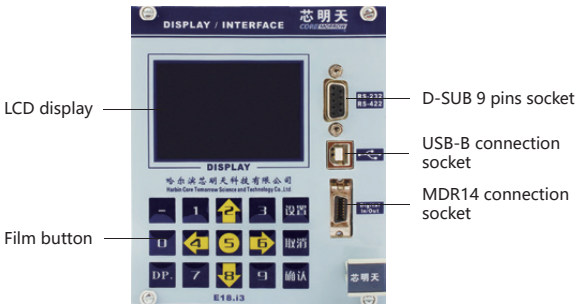


E09.S3 PZT sensor control module×1+E09.S1 PZT sensor control module×1: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



E09.S3 E09.S1

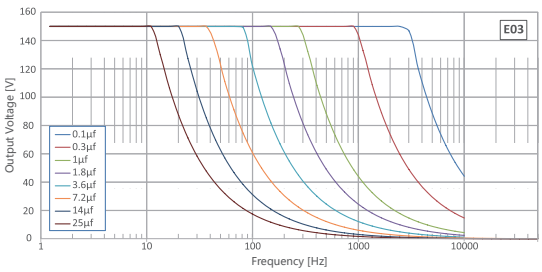
E18.i3 display & Interface module×2: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.

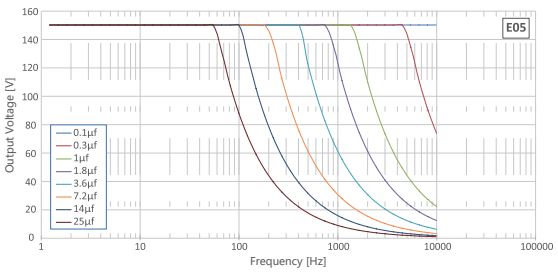


Technical Data

Types		E00.D4 (E03 and 05 modules)	
Power amplifier module	Channels	4	
	Contol analog input	-1.67~10V (Optional 0~5V)	
	Output voltage	-20~120V (Optional -20~150V)	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz (Optional 30k, 50kHz, etc.)	
	Ave.current	E03 module: 58mA, E05 module: 291mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
PZT sensor control module	Sensor type	SGS (Optional LVDT, CAP)	
	Sensor channels	4	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	E09.S1 module: BNC, E09.S3 module: ERA.0S.303.CLL	
	Sensor output votlage	0~10V	
Display & interface module	Channels	4	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%, 50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves





Included Cables

Power cable ×1

BNC to fish clip line×5
(4 for analog input, 1 for sensor output)

I/O line×1

LEMO line×1
(for sensor output)

USB line×1
(for communication)

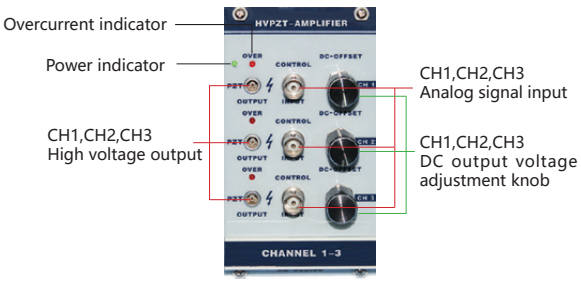
Series port line×1
(for communication)

E00.D6 Piezo Controller (E03 module)

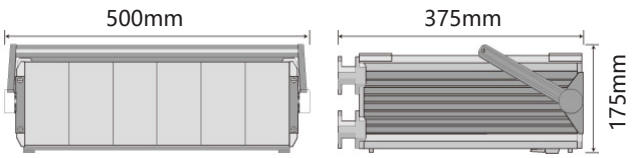
- 6 channels
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

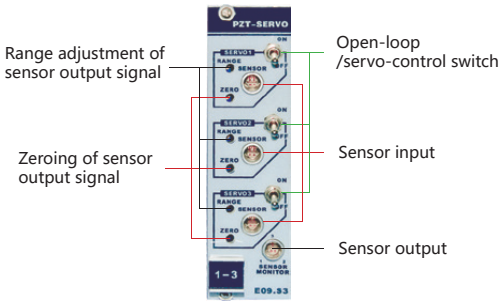
E03 power amplifier module × 2: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



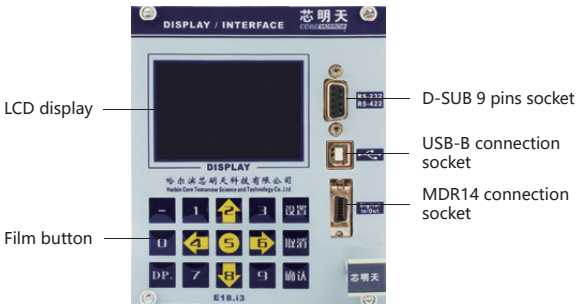
E00 Chassis & Power Supply Module × 1



E09.S3 PZT sensor control module × 2: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



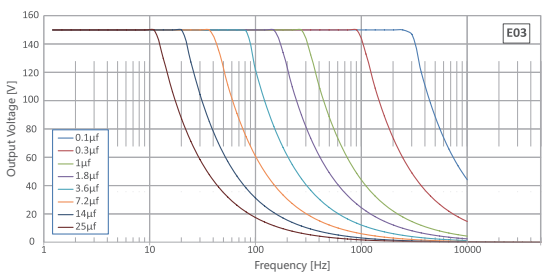
E18.i3 display & Interface module × 2: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E00.D6（E03 module）	
Power amplifier module	Channels	6	
	Contol analog input	-1.67~10V（Optional 0~5V）	
	Output voltage	-20~120V（Optional -20~150V）	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）	
	Ave.current	58mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）	
	Sensor channels	6	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	BNC	
	Sensor output votlage	0~10V	
Display & interface module	Channels	6	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves



Included Cables


Power cable ×1


BNC to fish clip line×6
(for analog input)


I/O line×1


USB line×1
(for communication)


LEMO line×2
(for sensor output)

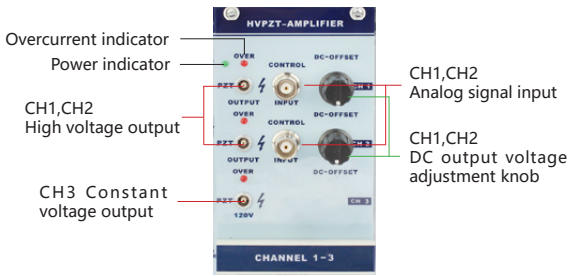

Series port line×1
(for communication)

E00.D6 Piezo Controller (E03 module, with constant output)

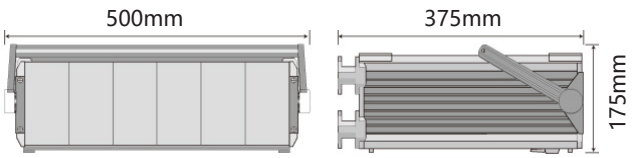
- 6 channels (2 constant outputs)
- Analog control
- Knob control
- Software control
- Keyboard control
- Servo control

Combination Modules

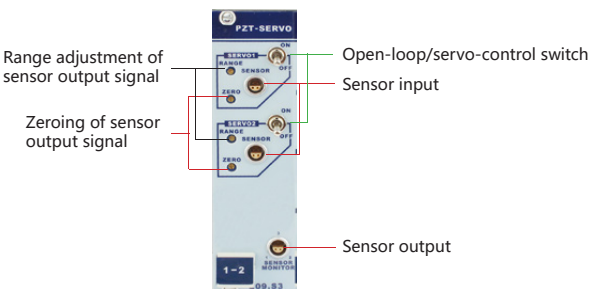
E03 power amplifier module(with constant output)×1: Its main function is to amplify small signal from external analog input or given by the computer through DA or other control signals through a voltage and power amplifier circuit inside the Power Amplifier Module.



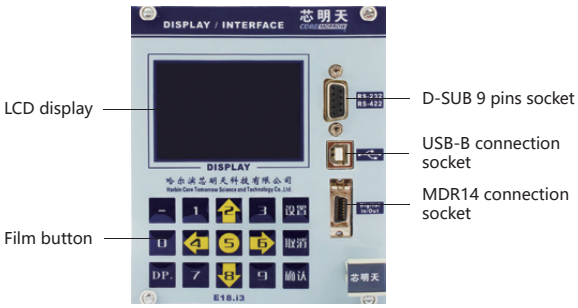
E00 Chassis & Power Supply Module×1



E09.S3 PZT sensor control module(with constant output)×2: E09 PZT sensor module provides high precision, high stability and high reliability excitation signals for sensors in nanopositioning mechanisms such as PZT or micromotion stages, and detects and processes feedback signals from PZT or micromotion stages. The servo control is done by the internal algorithm circuit. The E09 PZT sensor module is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



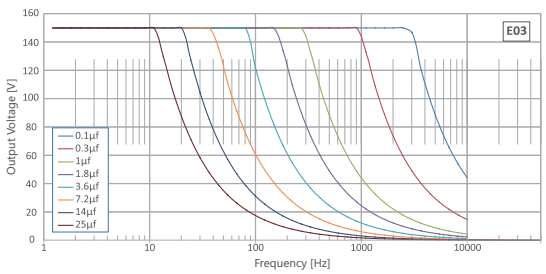
E18.i3 display & Interface module×2: With LCD and PC interface, E18 measures and displays the output voltage of Power Amplifier Module and the current displacement of sensor module, receives and processes control commands from computer, and with keyboard, LCD and is equipped software for human-computer interaction, and with servo control and other functions. It is not a stand-alone device and needs to be integrated into the E00/E01 chassis.



Technical Data

Types		E00.D6（E03 module, with constant output）	
Power amplifier module	Channels	6	
	Contol analog input	-1.67~10V（Optional 0~5V）	
	Output voltage	-20~120V（Optional -20~150V）,the 3rd and 6th channels are constant voltage output	
	Ripple	5mV	
	Voltage stability	< 0.1%F.S./8hours	
	Input impedance	100KΩ±20%	
	Bandwidth	10kHz（Optional 30k, 50kHz, etc.）	
	Ave.current	58mA	
	Peak current	1A	
	Bandwidth (1/10 signal)	>20kHz	
	Voltage gain	12	
	Knob adjustment	10 turns	
PZT sensor control module	Sensor type	SGS（Optional LVDT, CAP）	
	Sensor channels	6	
	Servo	Analog P-I+notch filter	
	Sensor port	ERA.0S.304.CLL	
	Sensor output port	BNC	
	Sensor output votlage	0~10V	
Display & interface module	Channels	6	
	D/A converter	16Bit±10V	24 Bit±10V
	Output voltage resolution	1/30000	1/1000000
	A/D converter	16Bit±10V	
	Film botton	15 buttons	
	Communication port	RS-232/422, USB	
	Bandrate	9600, 19200, 38400, 57600, 76800, 115200, 128000, 230400, 256000	
	Output frequency	10kHz	
	I/O port	1~3pcs, user can set the input or output, MDR14 connector	
	LCD keyboard control function	Output and measure voltage and displacement, spontaneous waveform, selection function, set parameters	
	Spontaneous waveform	Sine wave, square wave, triangle wave, sawtooth wave	
	Software control function	Output and measure voltage and displacement, waveform control, selection function, set parameters	
	Software waveform control	Programmable waveform output, standard waveform output	
	Secondary development	VC++, Matlab, LabView routine and DLL dynamic link library function, easy for development	
	Operating temperature	0~50℃	
Chassis & power supply module	Power supply	AC 220V±10%，50Hz±10%	
	Current limit	Short-circuited proof	
	L×H×D	500×175×375mm	
Function	Basic control way	Manual adjustment, analog input, computer serial/USB interface, spontaneous waveform control, open-loop/servo control	

Voltage vs Frequency Curves



Included Cables


Power cable ×1


LEMO line×2
(for sensor output)


I/O line×1


USB line×1
(for communication)


BNC to fish clip line×4
(for analog input)


Series port line×1
(for communication)

Introduction of Included Cable Connections with Controllers


Power cable


Series port line


USB line


I/O line


BNC to fish clip line


LEMO line


LEMO to fish clip line


Aviation plug to fish clip

Overview of the included cables for the E00/E01 series piezo controllers

Module / Type	Power Amplifier Module		PZT Sensor Control Module		Display & Interface Module			Chassis & Power Supply Module
	Analog In cable	PZT cable	Sensor cable	Sensor Monitor cable	I/O cable	USB cable	RS-232/422 cable	Power cable
E00.A/E01.A	√	√ [2]	-	-	-	-	-	√
E00.B/E01.B	√	~[1]	~[1]	√ [2]	-	-	-	√
E00.C/E01.C	√	√ [2]	-	-	√	√	√	√
E00.D/E01.D	√	~[1]	~[1]	√ [2]	√	√	√	√

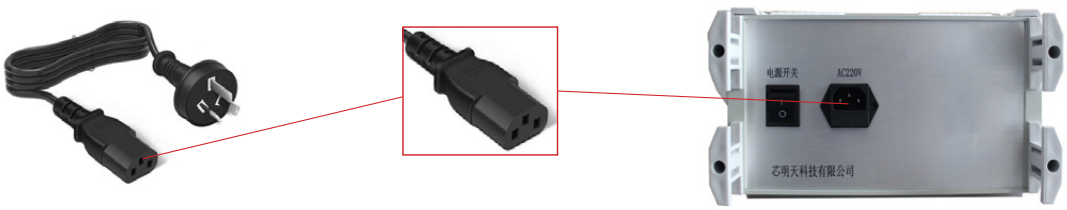
Explanation 1: The B&D series of E00/E01 controllers with closed-loop servo function, the interface of PZT and sensor are connected to PZT products of CoreMorrow, and no additional cables are provided;

Explanation2: Different types of products correspond to different cable models. Please refer to the following instructions for details;

Note: Different models of controllers come with different types of cables, please judge based on the actual product;

Introduction of included Cable Connections with Controllers

1 Cable to Chassis&Power Supply Module–Power cable



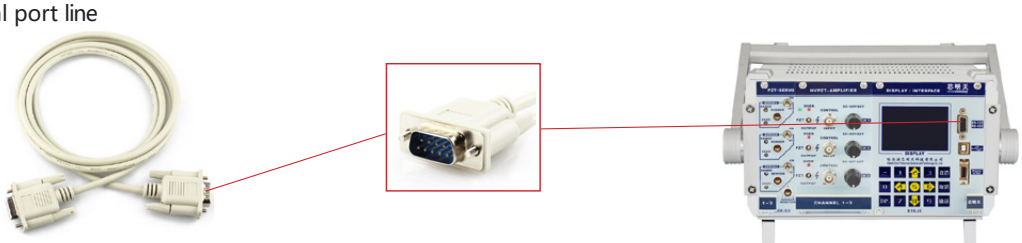
Insert the power cable into the AC220V power socket on the back of the controller, and plug the other end into a 220V/50Hz power socketbe.

Careful! Before connecting, please confirm that the power switch is in the off state, keeping the ○ position.

2.1 Cable to Display & Interface Module – serial port or USB, choose one to connect

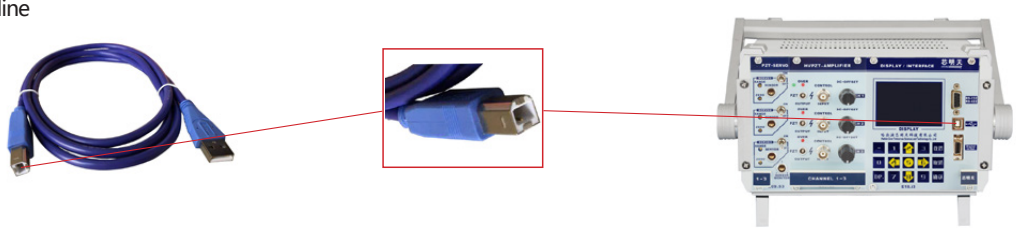
If the control mode is controlled by the upper computer, you can connect the computer to the controller interface module through USB/RS-232/RS-422 port access terminal to realize computer control. The cable connection method is as follows:

1) serial port line



Insert the pin end of the serial port cable into the RS-232/422 interface of the controller, and the other end into the corresponding interface of the computer.

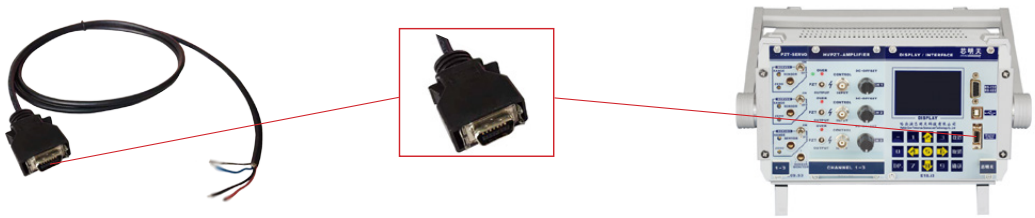
2) USB line



Insert the pin end of the USB cable into the USB interface of the controller and the other end into the corresponding interface of the computer

2.2 Cable to Display & Interface Module – Digital I/O control cable

If the control mode is digital I/O port control, the wire connection method is as follows:



Insert the connector of the I/O line into the Digital In/Out interface of the controller. As needed, it can be used as an input or output mode. When used as an input, the bare wire end is connected to an analog signal source (0 or 3.3V); When used as an output, connect the bare wire end to a voltage display device (such as an oscilloscope, multimeter, etc.).

Note: The digital I/O interface can be set to input or output mode by the user. The input mode can control the output and stop of the waveform- low level (0) output waveform, high level (3.3V) stop output waveform, and the output mode can track the output changes of the controller.

3.1 Cable to PZT Sensor Control Module – BNC to fish clip line

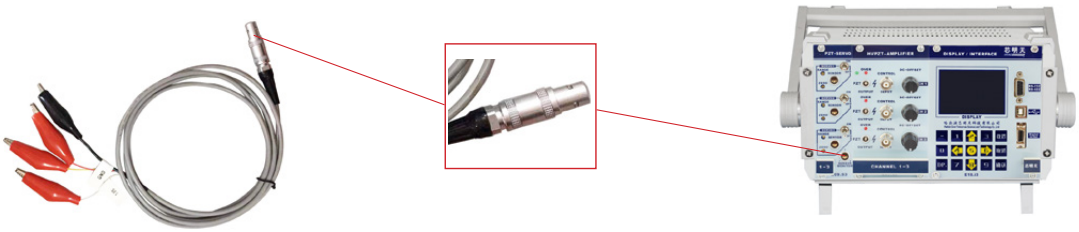
The corresponding sensing module model is E09.S1/L1/C1;

Connect the BNC end to sensor monitor interface of the controller, and connect the clamp end to the voltage display device (such as oscilloscope, multimeter, etc.). The red clamp is the positive pole.

For monitoring sensor output signals, to be connected as needed or not.

3.2 Cable to PZT Sensor Control Module – LEMO line

The corresponding sensing module model is E09.S2/L2/S3/L3;



Connect the LEMO end to the sensor monitor interface of the controller, and connect the clamp end to the voltage display device (such as oscilloscope, multimeter, etc.). The red clamp is the positive pole, and the numbers CH1, CH2, CH3 are channels 1, 2, and 3 in sequence.

For monitoring sensor output signals, to be connected as needed or not.

4.1 Cable to Power Amplifier Module–Analog input line

BNC to fish clip line (for analog input)

Connect the BNC end to the analog input jack of the controller, and connect the fish clip end to an external signal source (such as a signal generator, DA card, etc.). The red clamp is the positive pole.

4.2.1 Cable to Power Amplifier Module–PZT driven output line

LEMO to fish clip line (Determine whether to connect as needed, connect to PZT products, suitable for E03/E05/E06/E07 power amplifier module, provided with piezo stack)

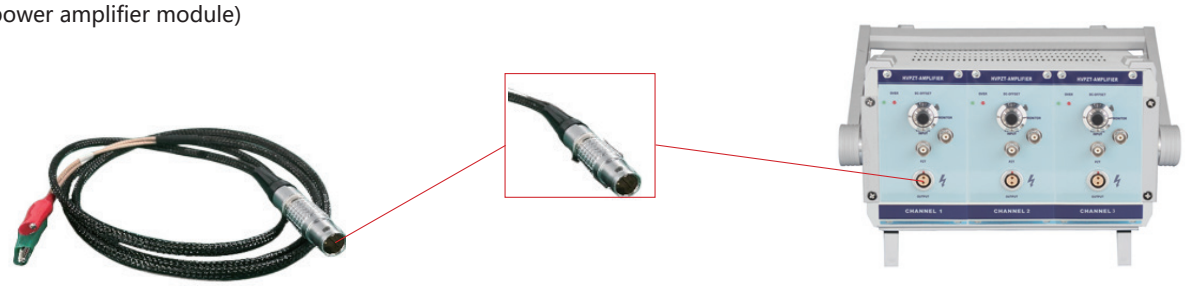
If the piezo product you are driving is a bare wire type without a connector, you can connect it through a single core LEMO wire. The LEMO end is connected to the OUTPUT terminal of the controller, and the clamp end is connected to the lead of the piezo product. The red clamp is the positive pole.

Note: The output of the fish clamp end is high voltage, which can cause fatal harm to the human body. It is necessary to perform insulation treatment and do not touch it directly!

After all cables are connected, the power switch located on the back panel of the controller can be turned on to start running the controller.

4.2.2 Cable to Power Amplifier Module–PZT driven output line(HV)

Two core high-voltage aviation plug to red green fish clip (connected to PZT products, suitable for E08 or combination power amplifier module)



The two core aviation terminal is connected to the OUTPUT terminal of the controller, and the clamp end is connected to the lead of the piezo product. The red clamp is the positive pole.

Note: The output of the fish clamp end is high voltage, which can cause fatal harm to the human body. It is necessary to perform insulation treatment and do not touch it directly!

After all cables are connected, the power switch located on the back panel of the controller can be turned on to start running the controller.

CoreMorrow Ltd.

Tel：+86-451-86268790

Email：info@coremorrow.com

Web：www.coremorrow.com

Headquater Address：Building I2, No.191 Xuefu Road, Nangang District, Harbin, China

Wechat